VITEK

VTC-IR302FN

ENVI 2.0 MegaPixel WDR Day/Night IR Bullet Camera with 120' Range

- 1/2.9" Sony® Exmor™ Progressive Scan CMOS Sensor
- Up to 30fps live view @ 1920x1080p
- Built-in Mega Pixel Fixed 3.6mm Lens
- 30 850nm Infrared LEDs with 120' IR Range
- Auto True Day Night (TDN) with Dual Filter Switch for no focus shift at night
- WDR (Wide Dynamic Range)
- 3D-DNR Noise Reduction
- 16:9 Video format
- H.264/MJPEG Dual Streaming
- Minimal Latency w/Max 16 User Connections
- Onvif Profile S Compatibility
- MicroSD Card Slot supporting up to 64GB cards for Onboard EDGE Recording and Playback
- Motion Detection, Privacy Masking & Highlight Masking
- Gasket Sealed with an IP66 Weather Resistance Rating
- 12VDC & PoE (Power over Ethernet) Operation

Specifications & installation procedure subject to change without notice.
Visit www.vitekcctv.com for the most current information available.

IPcctv
MegaPixel CCTV Over IP Networks

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1. Box Contents

1) VTC-IR302FN IP Infrared Bullet camera

2) Mounting Accessories

3) ENVI Series CD & Mounting Template

2. Included Accessories

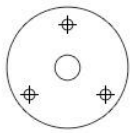
3mm Hex L-wrench
Qty: 1

Wall mounting screws
Qty: 3

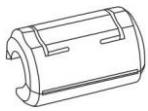
Anchors
If necessary, use the anchor to help secure the self tapping screws.
Qty: 3

Sunshield with Attachment thumb screw
Qty: 1

Mounting Template
Qty: 1



EMI Ferrite Core
Qty: 1

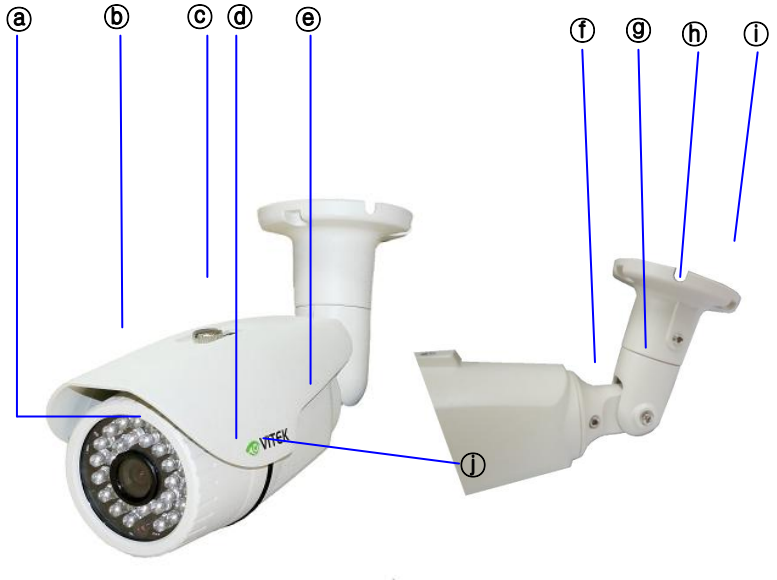


Thumb Screw/Washer for Sun Shield
Qty: 1 (each)

ENVI Series CD
Qty: 1

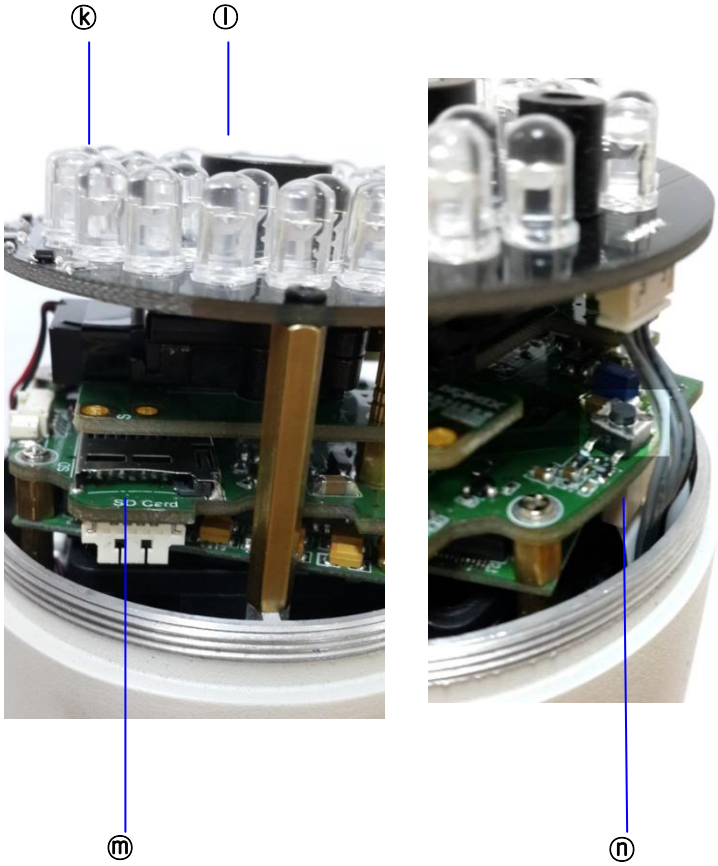
3. VTC-IR302FN Layout

3.1. External View



ⓐ Window
ⓑ Sunshield
ⓒ Fixing screw for Sunshield
ⓓ Front cover
ⓔ Body
ⓕ Mount Rotation Adjustment
ⓖ Mount Tilt Adjustment
ⓗ Mount Pan Adjustment
ⓘ Mounting base
ⓙ Rubber sealing

3.2. Internal View



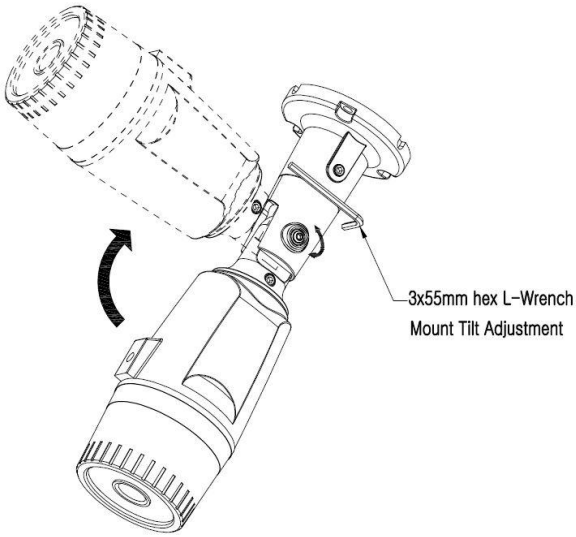
ⓚ Infrared LEDs(x30)
ⓛ Lens
ⓜ Micro SD Card Slot
ⓝ IP Reset Button

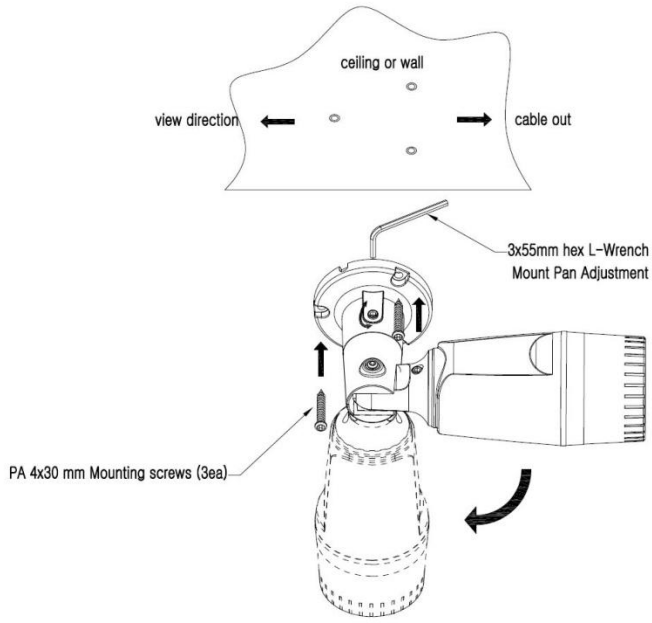
4. VTC-IR302FN Installation

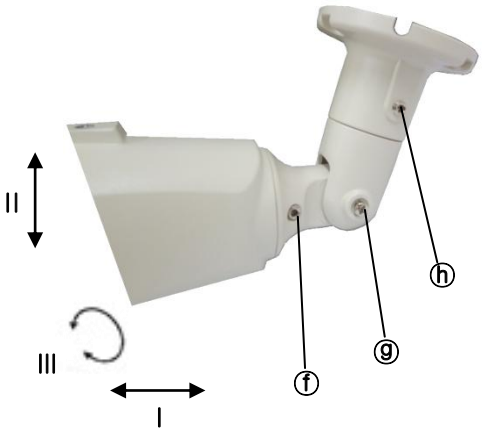
• Make sure the power is not applied before the installation.

4.1. Mounting The Camera

1. Drill 3 holes into the wall or ceiling using the supplied template
2. Insert the anchors into the drilled holes
3. Match (foot mount holes) to the drilled holes
4. Affix the mounting bracket by using supplied screws
5. Adjust the cameras Pan, Tilt, & Rotation with the hex screws on the mount





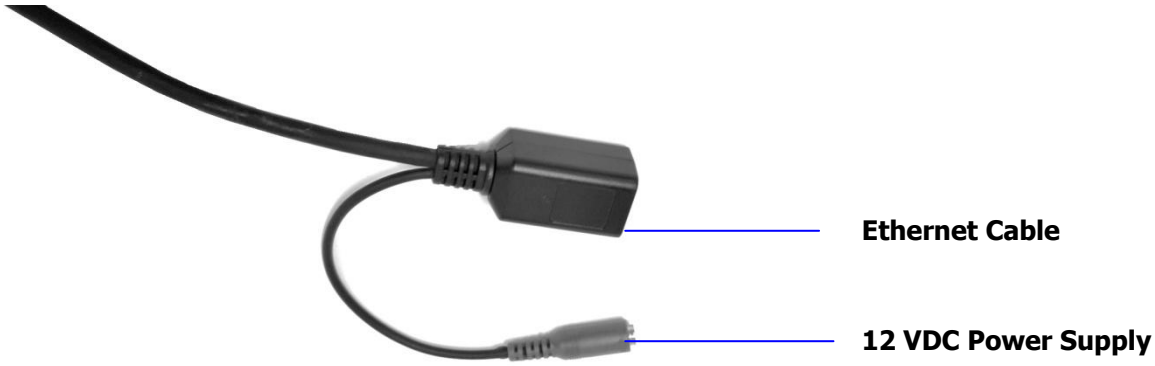


Adjust Pan: Adjust the camera direction with ⓗ screw for Pan-direction.

Adjust Tilt: Adjust the camera direction with ⓖ screw for Tilt-direction.

Adjust Rotation: Adjust the camera direction with ⓕ screw for rotation

4.2. Connections



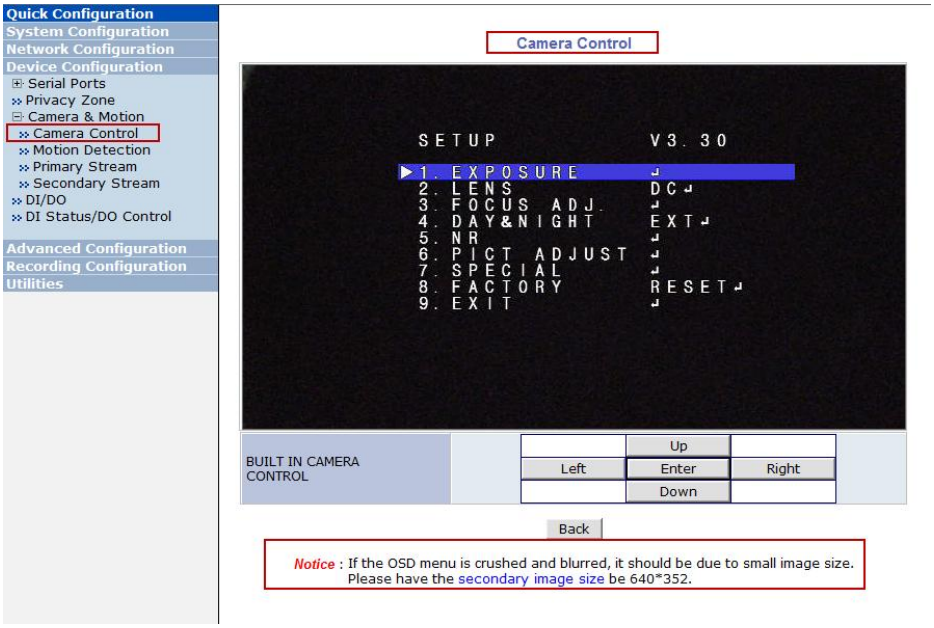
1. **Power**
   Depending on the type of installations, apply power to the camera by one of the three options below.

   a) Via Ethernet – Use only with POE switch (100 Meters max distance)
   b) 12VDC - Use with 12VDC 1A

2. **Ethernet Connection**
   Insert one end of the Ethernet cable into the network jack of your camera, and insert the other end into the data port (switch, router, etc)

4.3. Setup Menu

1. **Accessing the Setup Menu & Controls**
   The Setup menu can be accessed and controlled via the Web-Admin, Device Configuration> Camera & Motion> Camera Control.



4.4. Removable Storage

For recording directly on the camera you will need to install a MicroSD card, this will allow you to play video directly from the camera.

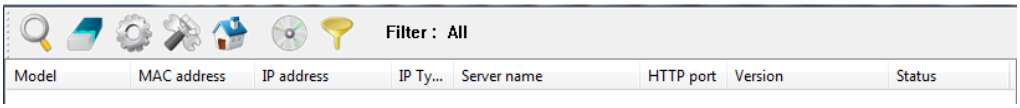
a) With the power disconnected insert the MicroSD memory card as shown below (the MicroSD card will need to be formatted.

5. Camera Software Installation

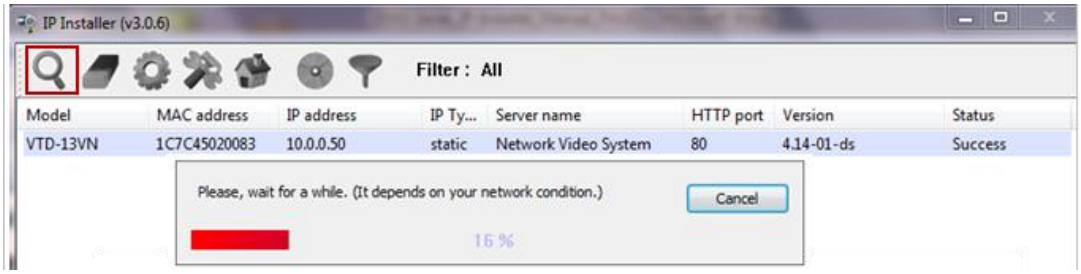
1. Run **IP Installer** Software from the CD program on a computer that is on the same network as the IP camera.

2. Start **IP Installer**, by double clicking the icon "**IP Installer**"

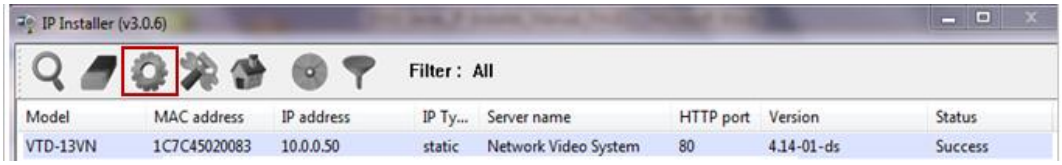
3. After the program has started, the main window of **IP Installer** program will appear on the screen as shown below.



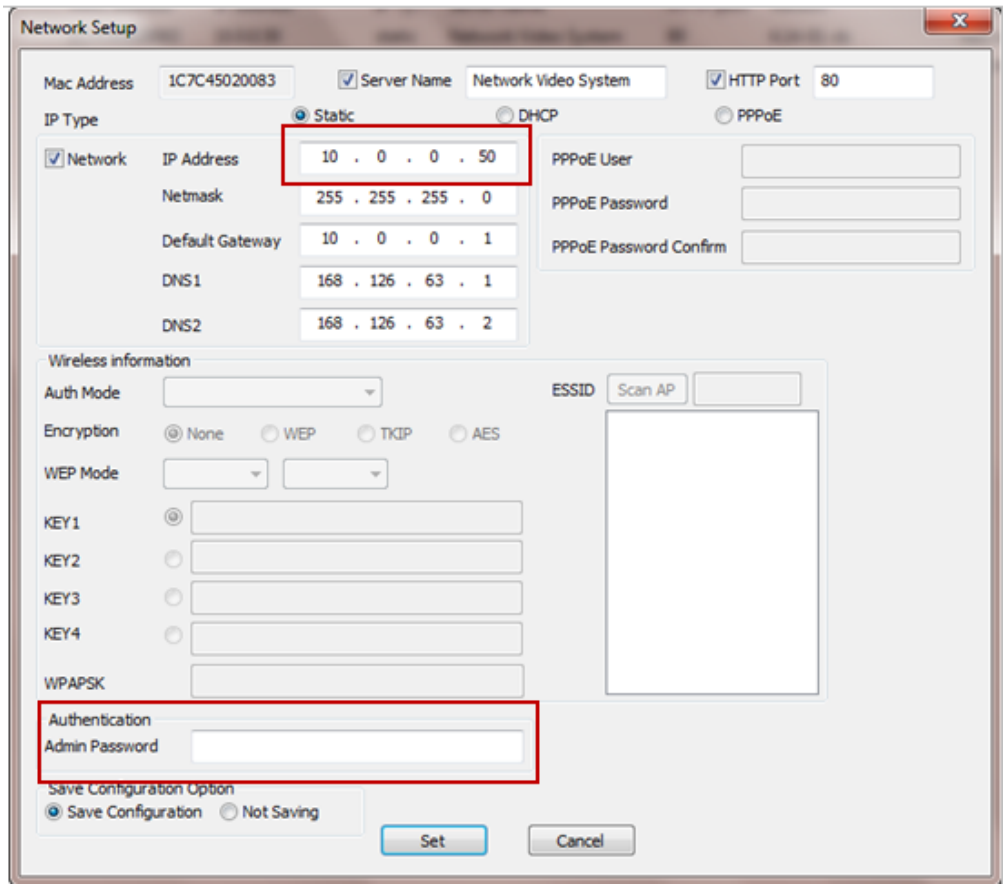
4. Search for the installed camera on the network by clicking the search product icon, the camera should appear as the image below. The default IP address is 10.20.30.40



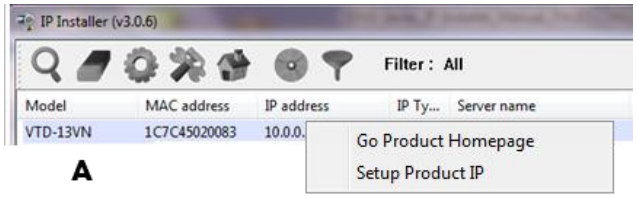
5. To assign an automatic IP address to this camera within the network, click the "Automatic IP Setup" icon



6. Verify the Automatic IP address provided, enter the default password root and then click **Set** as shown below.



7. After the camera was configured by the program automatically, you will be able to get access by
   a) Right click over the camera information, "*Go Product Homepage*"

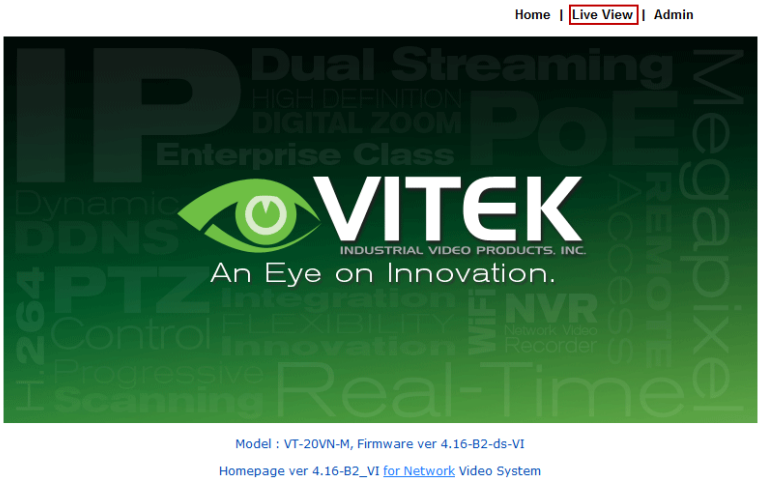


A

b) Click over the icon "*Connect Product Homepage*"

B

8. From the Home Page, you can "*Live View*" or administrate "*Admin*" the camera.


Home | Live View | Admin
VITEK
INDUSTRIAL VIDEO PRODUCTS, INC.
An Eye on Innovation.
Model : VT-20VN-M, Firmware ver 4.16-B2-ds-VI
Homepage ver 4.16-B2_VI for Network Video System

On Live View you will be able to see live video from your camera.

NOTE: For more information, refer to **Section 10.** ENVI Admin Menu **on page 34**.

6. VTC-302FN Features

1.3 & 2.0 MegaPixel Vandal Resistant Day/Night IR Bullet Cameras with 150' Range

- 1/2.9" Sony® Exmor™ Progressive Scan CMOS Sensor
- Up to 30fps live view @ 1920x1080p
- Built-in Mega Pixel Fixed 3.6mm Lens
- 30 850nm Infrared LEDs with 120' IR Range
- Auto True Day Night (TDN) with Dual Filter Switch for no focus shift at night
- WDR (Wide Dynamic Range)
- 3D-DNR Noise Reduction
- 16:9 Video format
- H.264/MJPEG Dual Streaming
- Minimal Latency w/Max 16 User Connections
- Onvif Profile S Compatibility
- MicroSD Card Slot supporting up to 64GB cards for Onboard EDGE Recording and Playback
- Secondary video output for ease of installation & maintenance
- Motion Detection, Privacy Masking & Highlight Masking
- Gasket Sealed with an IP66 Weather Resistance Rating
- 12VDC & PoE (Power over Ethernet) Operation

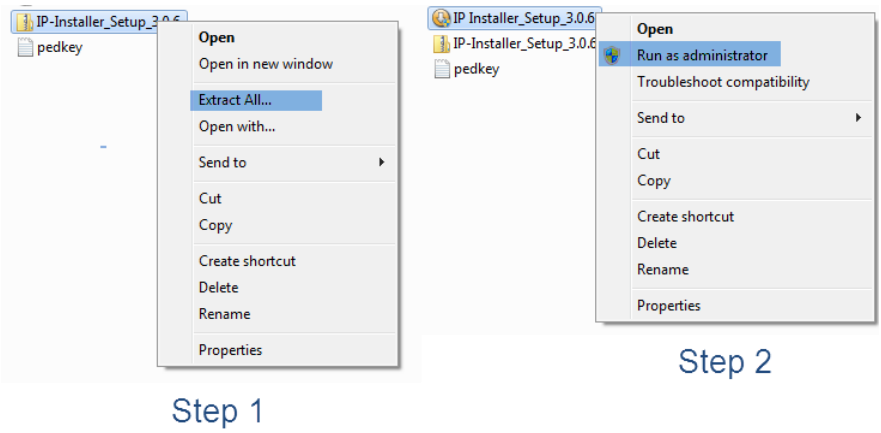
7. IP Installer: Introduction

IP Installer is a proprietary utility program for Vitek IP products. It enables users of Vitek products to search their network for any Vitek network camera, video server, or network video recorder no matter what IP address it has. By using IP Installer, users will be able to facilitate network setup process for Vitek products deployment.

- Runs on Microsoft Windows operating system (XP, Vista, 7, 8)
- Search for Network Cameras, Video Servers, and Network Video Recorders
- Capable of firmware updating
- Support automatic and manual IP setup

8. Installing and Uninstalling

** It's recommended to install this program as an administrator **



8.1. Installing IP Installer

If the program is started from the CD supplied with Vitek products, insert the CD in to CD/DVD tray and check the installation file. If it is download or copied from the Internet or any other media, locate the file from the PC's hard drive. You will see the icon as shown with the file name **IP Installer_Setup_x.x.x.exe**. The actual file name in your case may vary as the version changes. Double click the icon to star installation.

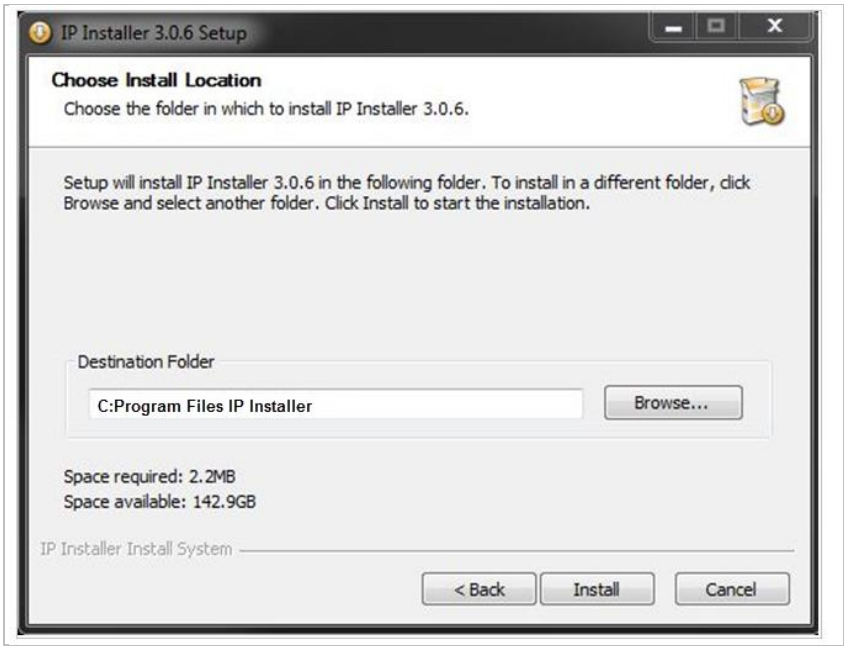
You may be prompted to continue running the installation program.

User Account Control
Do you want to allow the following program from an unknown publisher to make changes to this computer?
Program name: IP Installer_Setup_3.0.6.exe
Publisher: Unknown
File origin: Hard drive on this computer
Show details
Yes
No
Change when these notifications appear

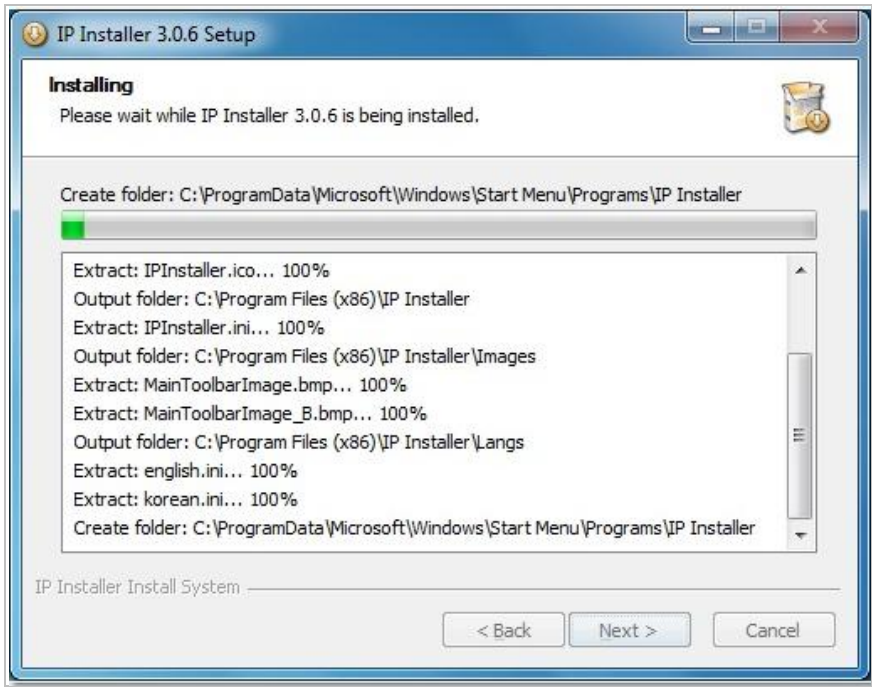
Click **Yes** button, then the following window will be shown on the screen.

IP Installer 3.0.6 Setup
Welcome to the IP Installer 3.0.6 Setup Wizard
This wizard will guide you through the installation of IP Installer 3.0.6.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

To continue the installation, click **Next**. The following window will be displayed for location to install.


IP Installer 3.0.6 Setup
Choose Install Location
Choose the folder in which to install IP Installer 3.0.6.
Setup will install IP Installer 3.0.6 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:Program Files IP Installer
Browse...
Space required: 2.2MB
Space available: 142.9GB
IP Installer Install System
< Back
Install
Cancel

The default location for installation is **C:\Program Files\IP Installer**. It is recommended to install in this folder, if you want to change it to a different location, click the **Browse** button to choose location. Now click the **Install** button. You will see the progress of the install as shown below.


IP Installer 3.0.6 Setup
Installing
Please wait while IP Installer 3.0.6 is being installed.
Create folder: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\IP Installer
Extract: IPInstaller.ico... 100%
Output folder: C:\Program Files (x86)\IP Installer
Extract: IPInstaller.ini... 100%
Output folder: C:\Program Files (x86)\IP Installer\Images
Extract: MainToolbarImage.bmp... 100%
Extract: MainToolbarImage_B.bmp... 100%
Output folder: C:\Program Files (x86)\IP Installer\Langs
Extract: english.ini... 100%
Extract: korean.ini... 100%
Create folder: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\IP Installer
IP Installer Install System
< Back
Next >
Cancel

When the files are done copying, the following window will be shown. Click the **Finish** button to complete the installation.

IP Installer 3.0.6 Setup
Completing the IP Installer 3.0.6 Setup Wizard
IP Installer 3.0.6 has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

8.2. Uninstalling IP Installer

If you want to remove the IP Installer program from your PC, click **Start > All Programs > IP Installer > Uninstall**.

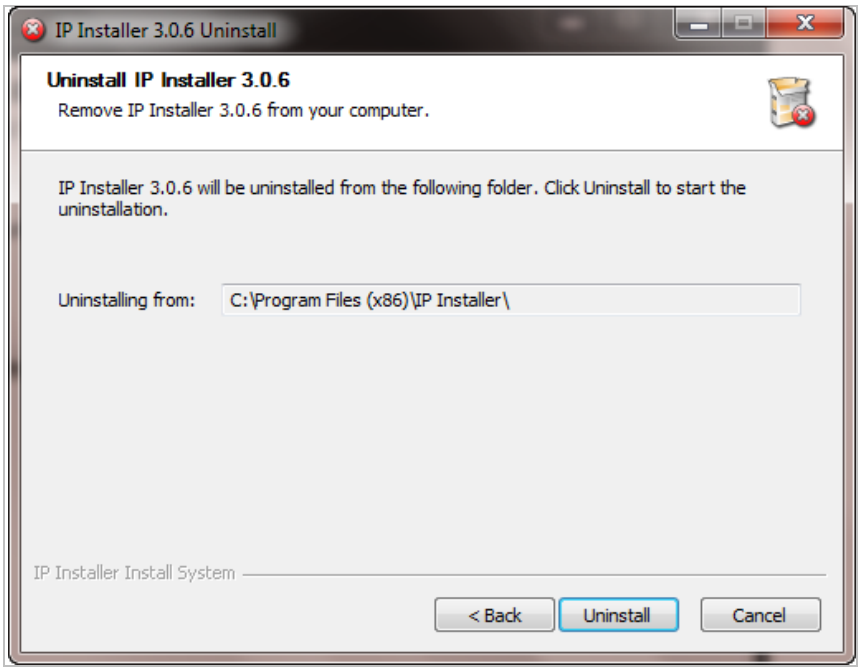
You may be prompt to continue running the uninstall program.

User Account Control
Do you want to allow the following program from an unknown publisher to make changes to this computer?
Program name: uninst.exe
Publisher: Unknown
File origin: Hard drive on this computer
Show details
Yes
No
Change when these notifications appear

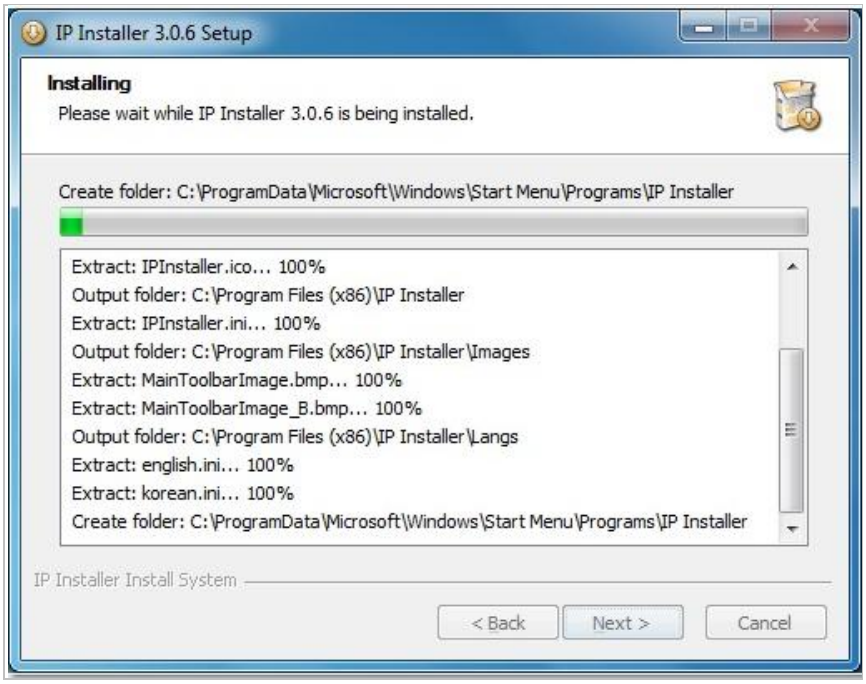
Click on the **Yes** button, then the following window will be shown on the screen.

IP Installer 3.0.6 Uninstall
Welcome to the IP Installer 3.0.6 Uninstall Wizard
This wizard will guide you through the uninstallation of IP Installer 3.0.6.
Before starting the uninstallation, make sure IP Installer 3.0.6 is not running.
Click Next to continue.
Next >
Cancel

Click on the **Next** button and you will see the following window.


IP Installer 3.0.6 Uninstall
Uninstall IP Installer 3.0.6
Remove IP Installer 3.0.6 from your computer.
IP Installer 3.0.6 will be uninstalled from the following folder. Click Uninstall to start the uninstallation.
Uninstalling from:
C:\Program Files (x86)\IP Installer\
IP Installer Install System
< Back
Uninstall
Cancel

Click on the **Uninstall** button to start removing the **IP Installer** program from your computer. The following window will be displayed.


IP Installer 3.0.6 Setup
Installing
Please wait while IP Installer 3.0.6 is being installed.
Create folder: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\IP Installer
Extract: IPInstaller.ico... 100%
Output folder: C:\Program Files (x86)\IP Installer
Extract: IPInstaller.ini... 100%
Output folder: C:\Program Files (x86)\IP Installer\Images
Extract: MainToolbarImage.bmp... 100%
Extract: MainToolbarImage_B.bmp... 100%
Output folder: C:\Program Files (x86)\IP Installer\Langs
Extract: english.ini... 100%
Extract: korean.ini... 100%
Create folder: C:\ProgramData\Microsoft\Windows\Start Menu\Programs\IP Installer
IP Installer Install System
< Back
Next >
Cancel

Click on the **Finish** button to close the window

IP Installer 3.0.6 Uninstall
Completing the IP Installer 3.0.6 Uninstall Wizard
IP Installer 3.0.6 has been uninstalled from your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

9. Using IP Installer

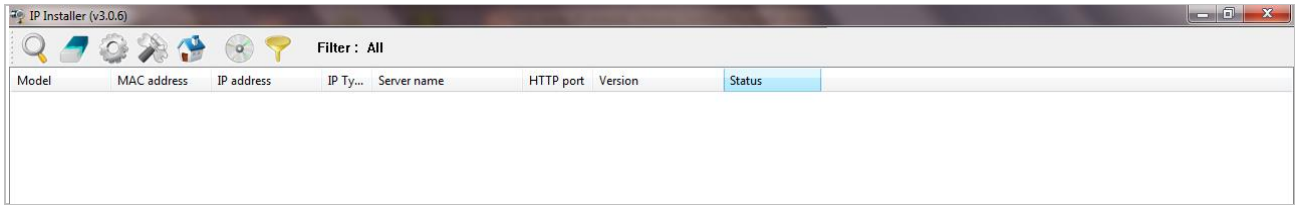
9.1. Starting the Program

Once **IP Installer** program has been installed on your computer, a shortcut icon

should be created on the desktop of your computer. You can start **IP Installer** by double clicking the icon.

Or you can also start the program by clicking **Start > All Programs > IP Installer > IP Installer** as shown below.

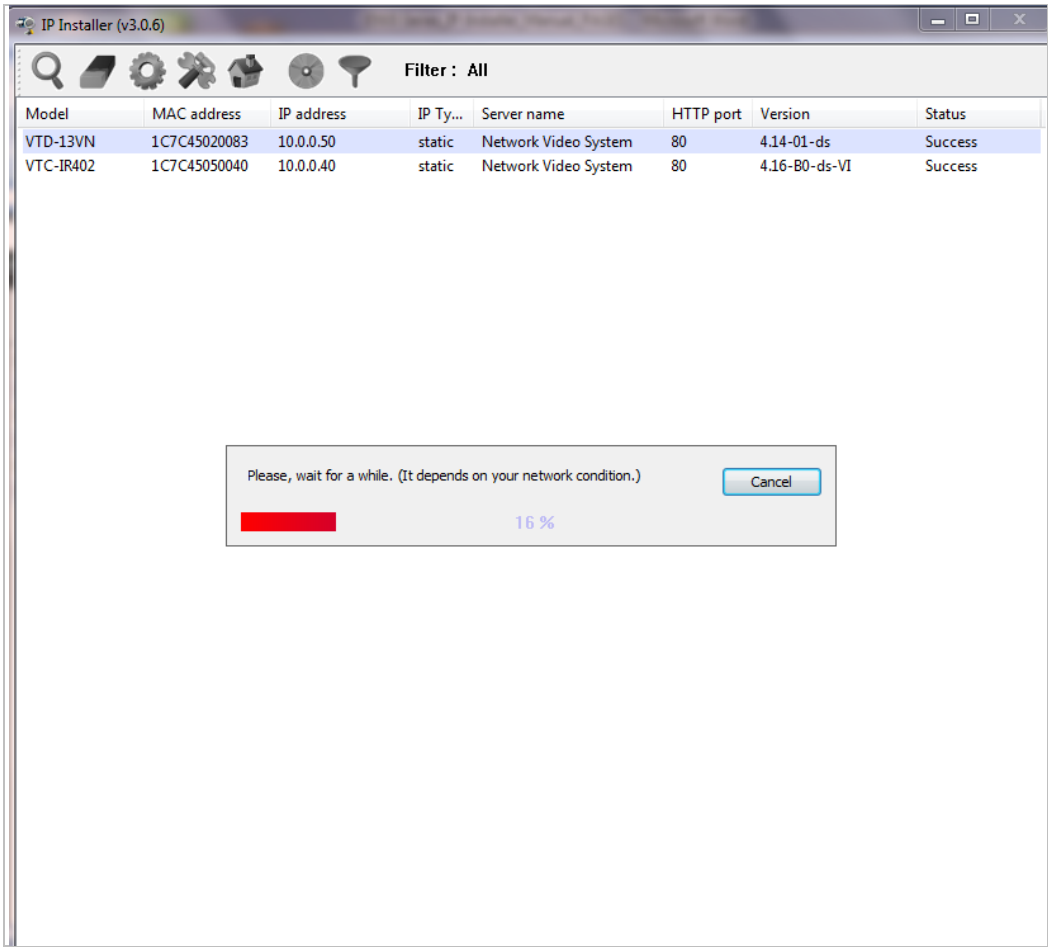
After the program has started, the main window of **IP Installer** program will appear on the screen as shown below. There are no network devices shown, as it is the first time running the program and nothing has been registered.



	Search Product	Scan the network and shows the list of all the Vitek products that IP Installer program found.
	Clear Product List	Clear the Vitek products list created by searching the network.
	Automatic IP Setup	Configure the network setting of selected IP device in Automatic mode.
	Manual IP Setup	Configure the network setting of selected IP device in Manual mode.
	Connect Product Homepage	Connect to the server homepage of the selected IP device.
	Update Firmware	Update the firmware of the selected IP device.
	Filter Configuration	Define the range of MAC and IP addresses to search.

9.2. Search Product

Make sure that your Vitek products are powered and connected to the network, and then click the **Search Product** button. A status window will pop up to show the progress of the search. Wait until it reaches 100%, or you may press the **Cancel** button to stop the search at any given time and proceed with the results made until that moment.

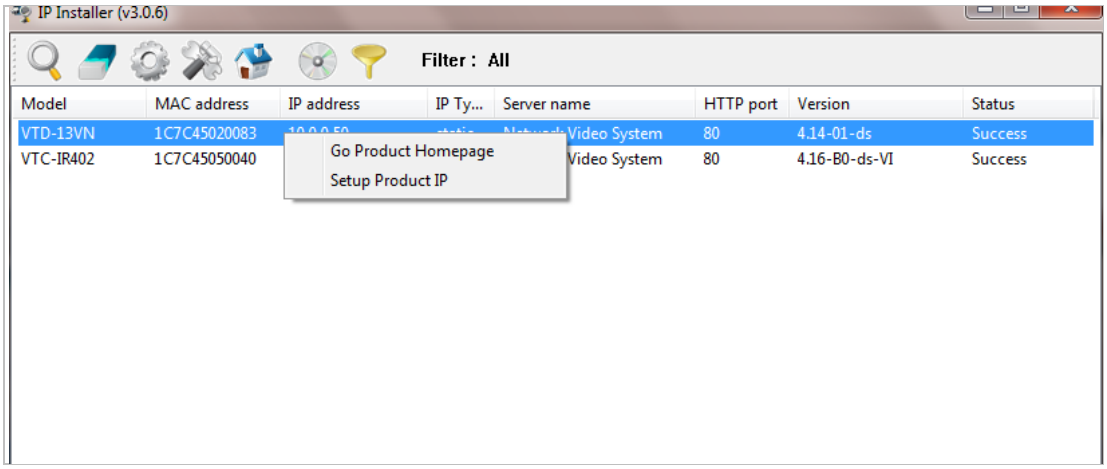


After searching is completed 100%, the **IP Installer** program will display the IP devices found.

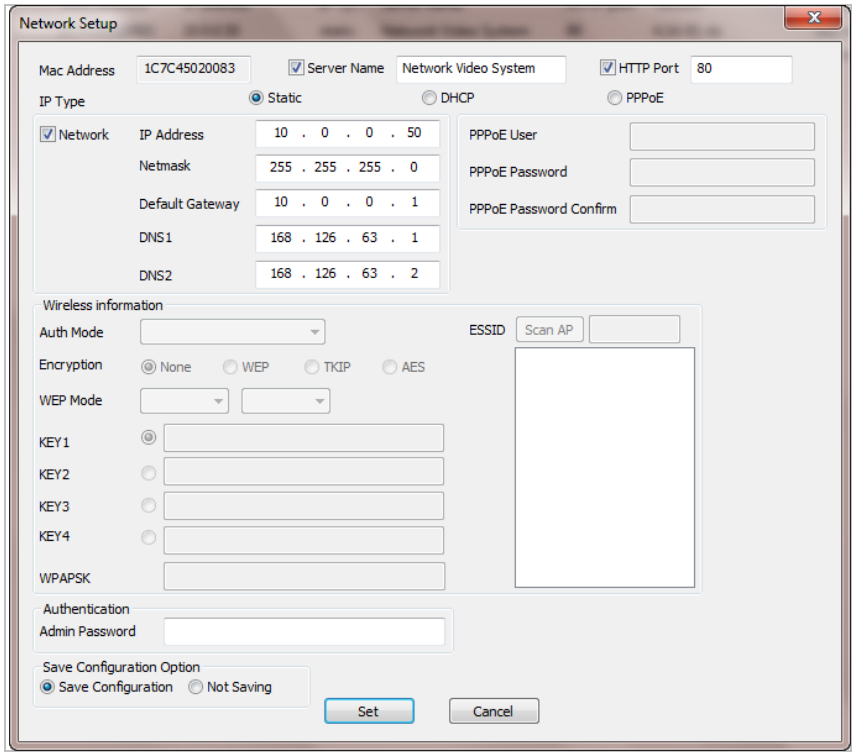
If you want to clear the list of the IP Devices from the window, click **Clear Product List** button from the Main Toolbar.

Manual Network Setup

Configuring the network parameters of the devices in the list can be started either by highlighting and right clicking mouse button or by clicking **Manual IP Setup** button on the main **Toolbar**.



When one IP device is selected, the following screen will appear



MAC Address	MAC address of the selected device is shown.
Server Name	Input desired name of camera i.e. Lunch Room
HTTP Port	Input port number to access IP devices homepage via web. Default port is 80
IP Type	Select the type of address (Static / DHCP / PPPoE) Use **STATIC** for manual IP setup

Network	General network parameters are required in this part. Please contact your network administrator for detail.(**IP Address, Netmask, Default Gateway, DNS1, DNS2**)
Authentication (Admin Password)	Password for the IP device. (Default password for Vitek products is "**root"** unless already changed)
Save Configuration Option	Select whether the configured contents is to be saved in the Camera memory or not. • **Save Configuration**: Changed values will be saved in the Camera memory of the device, which means the changes are permanent. • **Not Saving**: Changed values will not be saved in the Camera memory, which means if the IP device is turned off the changes are lost and the previous setting will be applied back.

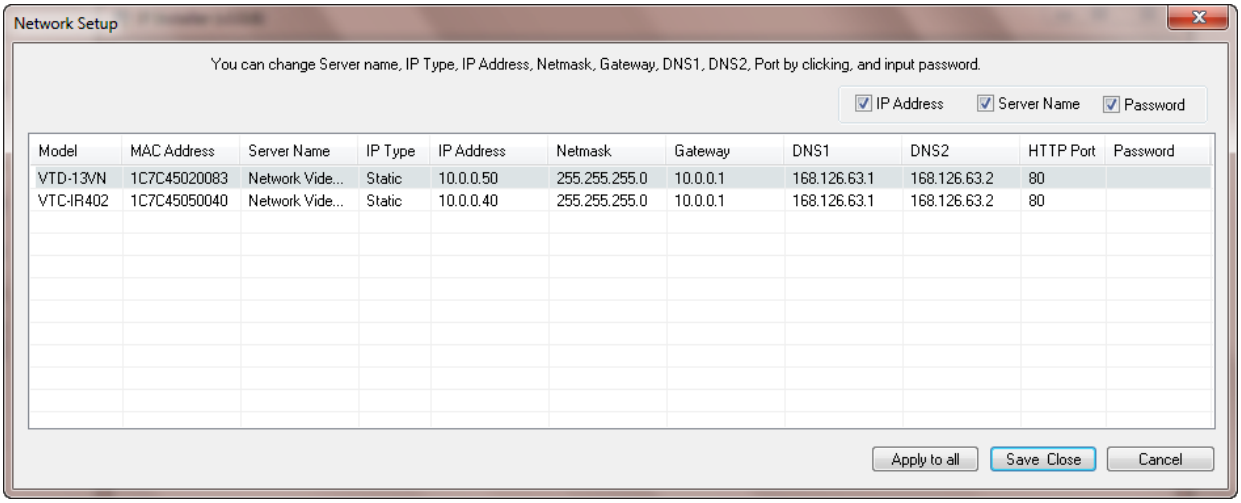
Click **Set** button to apply the changed values to IP device. If you don't want it, click **Cancel** button.

When two or more IP devices are selected

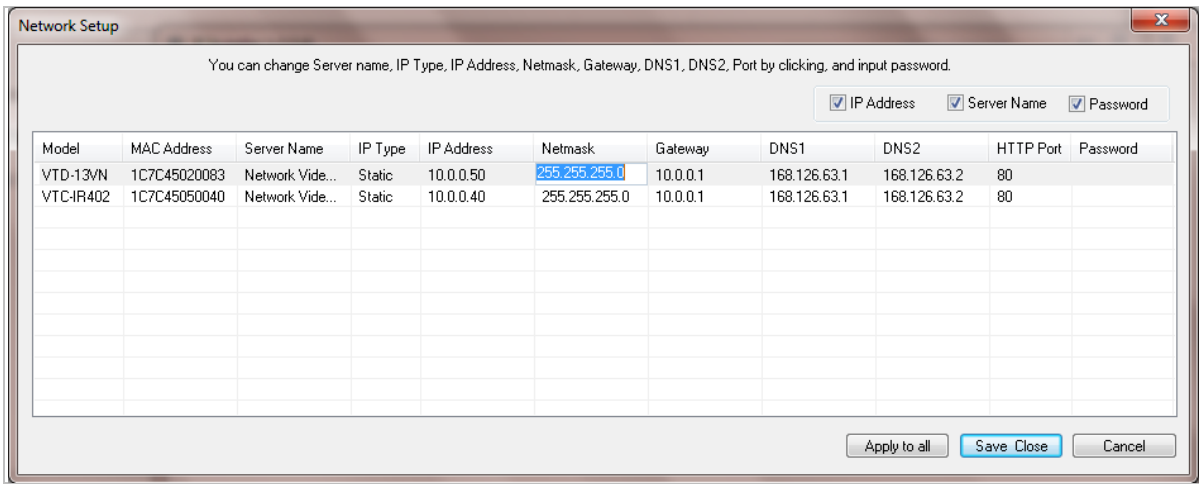
You can select two or more IP devices at the same time by clicking one after another while CTRL key is pressed. The result is shown as below.

To configure the network parameters of those devices, click the right mouse button or click **Manual IP Setup** icon on the main **Toolbar** with multiple IP devices selected as shown above.

Then the following window will show up.


Network Setup
You can change Server name, IP Type, IP Address, Netmask, Gateway, DNS1, DNS2, Port by clicking, and input password.
IP Address
Server Name
Password
Model MAC Address Server Name IP Type IP Address Netmask Gateway DNS1 DNS2 HTTP Port Password
VTD-13VN 1C7C45020083 Network Vide... Static 10.0.0.50 255.255.255.0 10.0.0.1 168.126.63.1 168.126.63.2 80
VTC-IR402 1C7C45050040 Network Vide... Static 10.0.0.40 255.255.255.0 10.0.0.1 168.126.63.1 168.126.63.2 80
Apply to all
Save Close
Cancel

You can modify the value of each changeable field by clicking it. The following shows an example of entering a new value to a field.

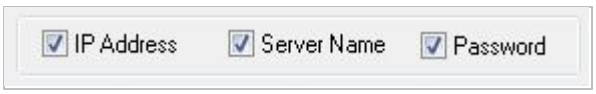

Network Setup
You can change Server name, IP Type, IP Address, Netmask, Gateway, DNS1, DNS2, Port by clicking, and input password.
IP Address
Server Name
Password
Model MAC Address Server Name IP Type IP Address Netmask Gateway DNS1 DNS2 HTTP Port Password
VTD-13VN 1C7C45020083 Network Vide... Static 10.0.0.50 255.255.255.0 10.0.0.1 168.126.63.1 168.126.63.2 80
VTC-IR402 1C7C45050040 Network Vide... Static 10.0.0.40 255.255.255.0 10.0.0.1 168.126.63.1 168.126.63.2 80
Apply to all
Save Close
Cancel

Model	Model Numbers of the IP devices that you selected.
MAC Address	MAC address of the selected device is shown.
Server Name	Name of the selected IP device.
IP Type	How to assign IP address to the device (Select **Static** here for Manual IP Setup)
IP address, Netmask, Gateway, DNS1, DNS2	General network parameters are required in this part. Please contact your network administrator for detail.
HTTP Port	HTTP port number of the IP device for web access to homepage.
Password	Password for the IP device.(Default password for Vitek products is "**root"**)

If you click **Apply to all** button after changing just a field of one IP device, the remaining IP devices will have the same value for that parameter. In this case, each device's **Server name** and **IP Address** field will have +1 incremented value added to the original value. For example, if the first IP device has been given the server name of **NetCam** and **Apply to all** button is pressed, it will be automatically changed to **NetCam1** and the next IP device will have **NetCam2** and so on. The same applies to the **IP address** field.

For Password field, the entered information doesn't increment but will use the same data.

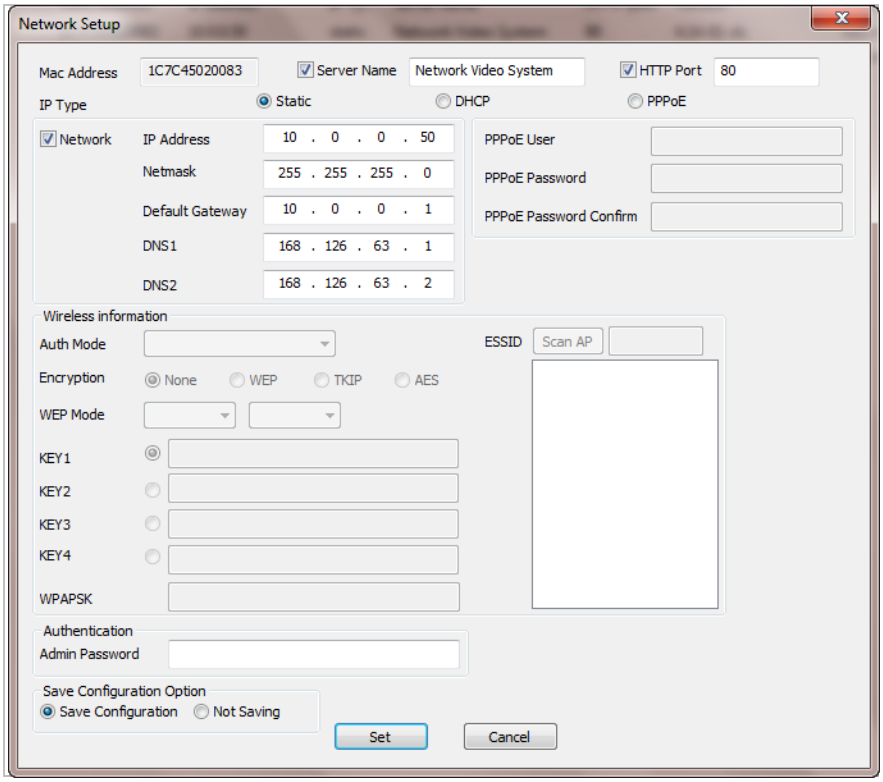
In using **Apply to all**, you can choose which field is affected. Put check marks only on the field you want to use this automatic action as below.



Click **Save & Close** button to save the changed values in the camera memory of all the IP devices and close the Network setup window.

9.3. Automatic Network Setup

Configuring the network parameters of the devices in the list can be started either by clicking right mouse button or by clicking **Automatic IP Setup** button on the main **Toolbar**. Before starting the setup, you first need to choose the one to be configured. In this setup mode, IP Installer program checks your local network and assigns available IP addresses to the IP devices. You have a choice of using those automatically assigned IP addresses, or you can just enter other IP addresses as you desire.



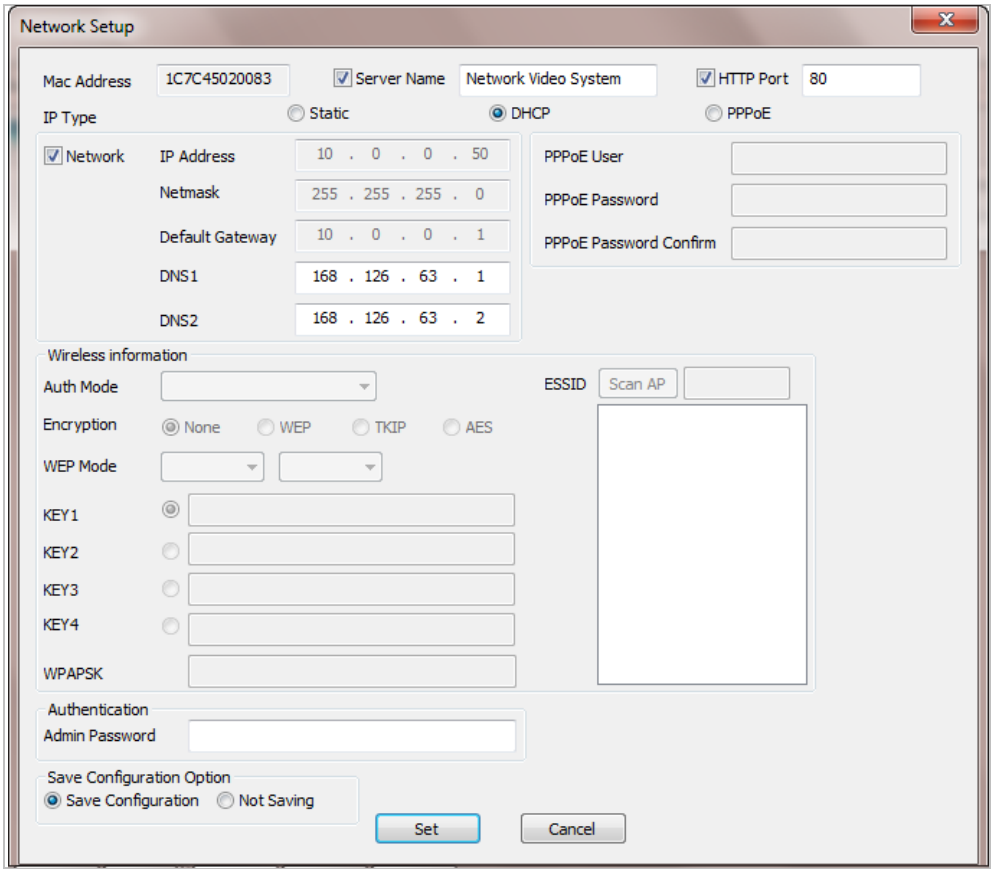
Server Name	Name of the selected IP device.
HTTP Port	HTTP port number of the IP device for web access to homepage.
IP Type	How to assign IP address to the device (Select **Static** here for Manual IP Setup)
Network	General network parameters are required in this part. Please contact your network administrator for detail. (**IP Address, Netmask, Default Gateway, DNS1, DNS2**)
Authentication (Admin Password)	Password for the IP device. (Default password for Vitek products is "**root"**)
Save Configuration Option	Select whether the configured contents is to be saved in the Camera memory or not. • **Save Configuration**: Changed values will be saved in the Camera memory of the device, which means the changes are permanent. • **Not Saving**: Changed values will not be saved in the Camera memory, which means if the IP device is turned off the changes are lost and the previous setting will be applied back.

Click **Set** button to apply the changed values to IP device. If you don't want it, click **Cancel** button to restore the previous values.

Note: If your network has more than one IP address Zone at the same time, the confirmation window will be displayed as below. You need to choose the one you are going to use for your IP devices.

9.4. Using DHCP Server

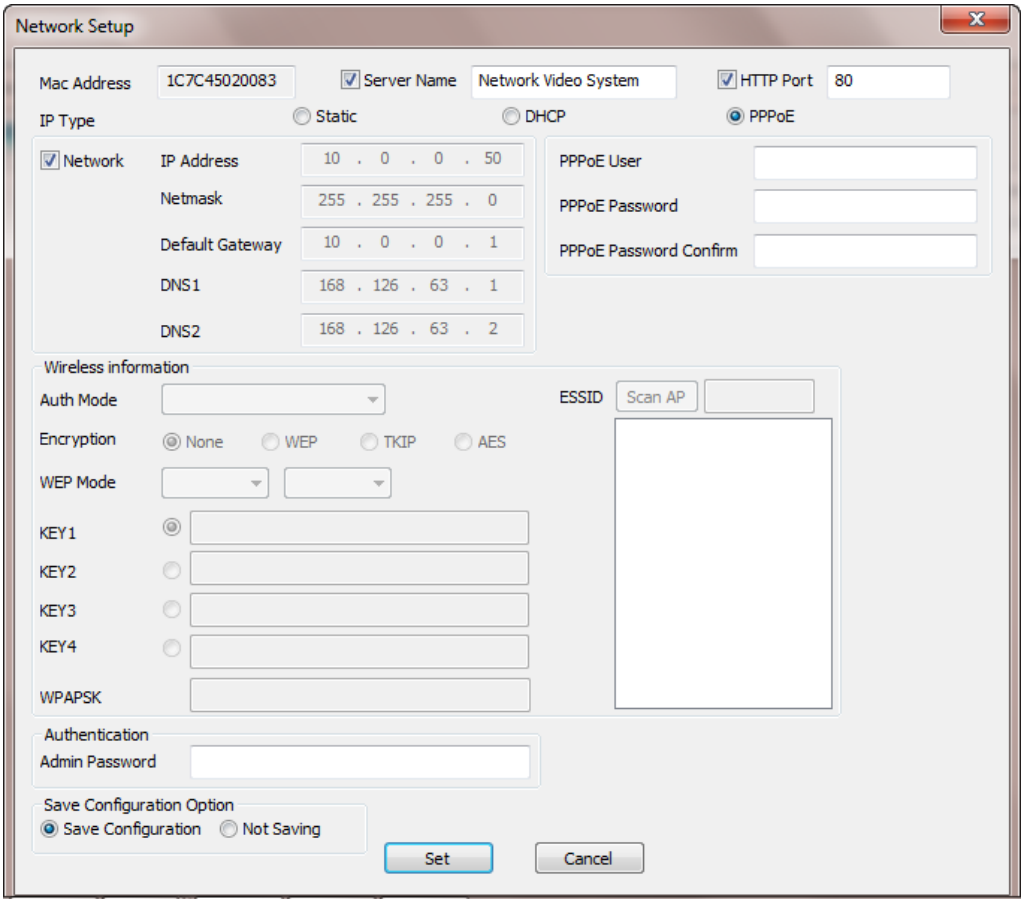
If your network has a DHCP server running for assigning IP addresses, you may choose to let it assign IP addresses to the IP devices on the list. To do that, first open the Network Setup window either by **Manual IP Setup** or **Automatic IP Setup** procedure. Choose **DHCP** in "IP Type" selection, then **IP Address**, **Netmask**, **Default Gateway** field in **Network** setup area on the window will be disabled to input as shown below.



For setting up other fields on the setup window, refer to **Section 0 Manual Network Setup on page 22**. After filling the fields with appropriate values, click **Set** button to apply the changed values to IP device. If you don't want it, click **Cancel** button to restore the previous values.

9.5. Using PPPoE

If your network environment is based on PPPoE connection, you'll need to choose **PPPoE** on IP Type selection. First open the Network Setup window either by **Manual IP Setup** or **Automatic IP Setup** procedure. Choose **PPPoE** in IP Type selection, and then all the fields in **Network** setup area on the window will be disabled. The network settings such as IP Address, Netmask, Default Gateway and DNS are no longer available to enter. You only need to enter the Server Name, HTTP Port number, and login authentication for your PPPoE connection.

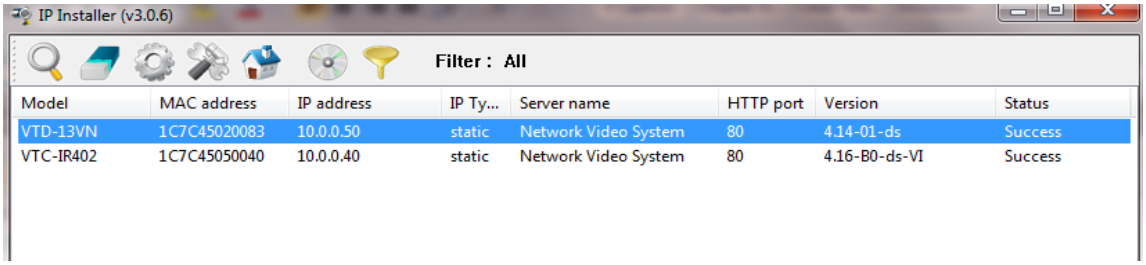


MAC Address	MAC address of the selected device is shown.
Server Name	Name of the selected IP device.
HTTP Port	HTTP port number of the IP device for web access to homepage.
IP Type	How to assign IP address to the device (Select **PPPoE** in this mode)
PPPoE	User Authentication for PPPoE Connection. • **PPPoE User**: Enter User ID. • **PPPoE Password**: Enter Password for the User ID. • **PPPoE Password Confirm**: Enter the same Password again.
Authentication (Admin Password)	Password for the IP device. (Default password for Vitek products is "**root"** unless already changed)
Save Configuration Option	Select whether the configured contents is to be saved in the Camera memory or not. • **Save Configuration**: Changed values will be saved in the Camera memory of the device, which means the changes are permanent. • **Not Saving**: Changed values will not be saved in the Camera memory, which means if the IP device is turned off the changes are lost and the previous setting will be applied back.

Note: After setting up the network for the IP devices, make sure the IP devices are accessible on the network from your computer. It can be done by running Live View function of the homepage of the IP device's built-in server. Refer to **Section 9.8** *Live View* **on page 32** *for more information.*

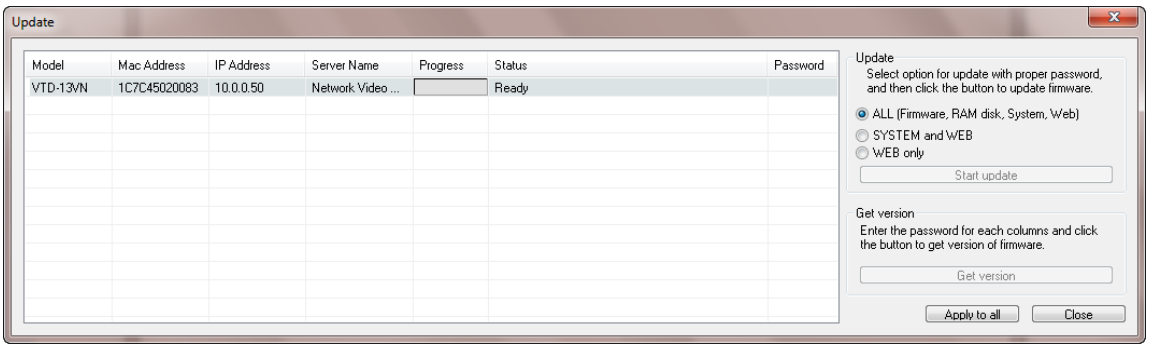
9.6. Updating Firmware

Once IP devices are searched and shown on the screen as functioning successfully, you can update the firmware of them in "IP Installer" program. To do that, first check the firmware version of the device, which you can find on the IP Installer window.


IP Installer (v3.0.6)
Filter : All
Model MAC address IP address IP Ty... Server name HTTP port Version Status
VTD-13VN 1C7C45020083 10.0.0.50 static Network Video System 80 4.14-01-ds Success
VTC-IR402 1C7C45050040 10.0.0.40 static Network Video System 80 4.16-B0-ds-VI Success

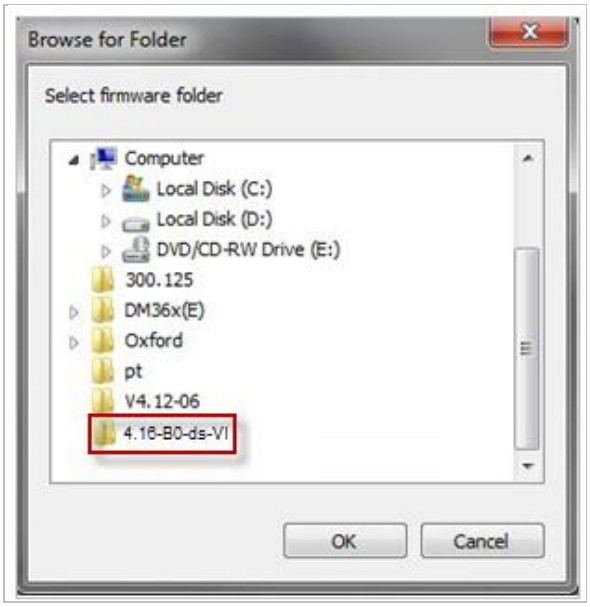
In the above picture, the firmware version of this product is 4.14-01-ds while the latest firmware version available is 4.16-B0-ds-VI as you could see at Vitek's homepage (http://www.vitekcctv.com/Downloads.asp). If you decide to update the firmware, first create a folder on your computer for the update firmware, than download the latest firmware to that folder.

Then select the IP device to be updated on IP Installer window, then click **Update Firmware** button from the toolbar. The following window will be displayed.

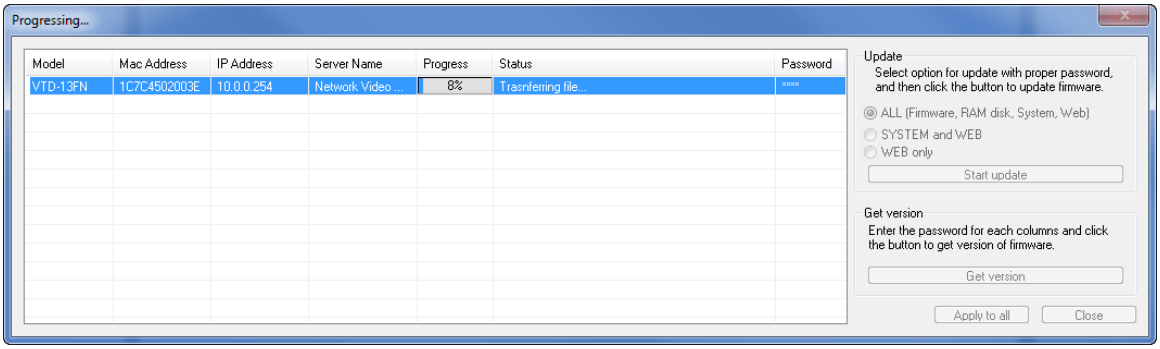

Update
Model Mac Address IP Address Server Name Progress Status Password
VTD-13VN 1C7C45020083 10.0.0.50 Network Video ... Ready
Update
Select option for update with proper password, and then click the button to update firmware.
ALL (Firmware, RAM disk, System, Web)
SYSTEM and WEB
WEB only
Start update
Get version
Enter the password for each columns and click the button to get version of firmware.
Get version
Apply to all
Close

You may find the **Password** field is empty on the window shown above. If so, click the Password field of the IP device and enter the proper password for the device. You are not allowed to update the firmware if the correct password is not provided.

After the password is entered, the **Start Update** button will be enabled now. Click the button to see the following window for selecting the folder where the file has been saved. *Highlight the folder than click* **OK**.



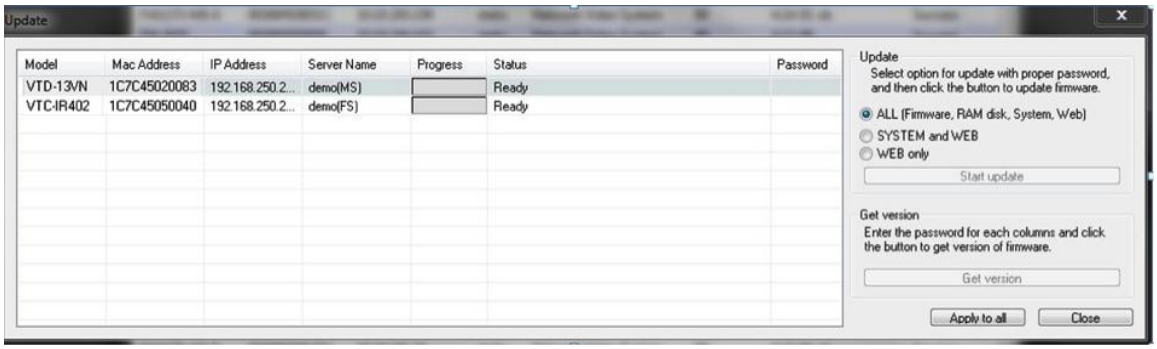
After clicking OK the following window will be displayed.



Note: Do not CLOSE window until completed, to avoid permanent damage to the camera.

You can also select multiple IP devices at the same time, and have them start firmware updating in a single step. Select the files to update by holding CTRL key and selecting which IP devices to update

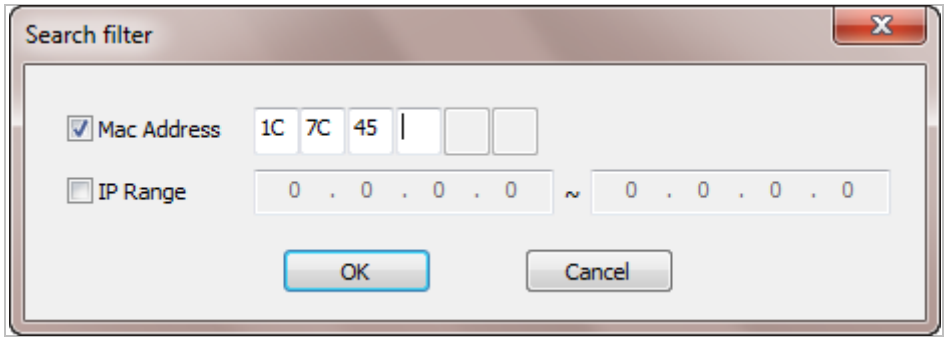
Click **Start Update** button. You will see the update window brought up with multiple IP devices listed.



The rest of the procedure is the same as in the firmware update case for a single IP device.

9.7. Filter Configuration

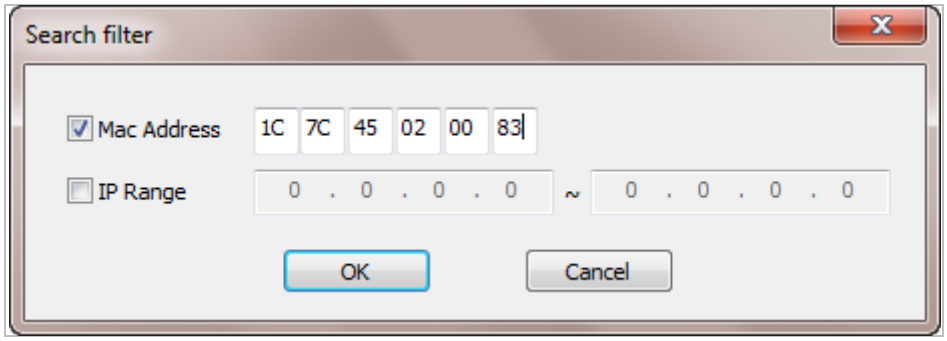
When you need to search only for the IP device having a specific range of MAC or IP addresses, you can do it by using this feature. To set the search condition, click **Filter Configuration** button on the Toolbar, then the following window will show up on the screen.



The first six HEX characters are already filled in with 1C:7C:45, which is the MAC prefix for Vitek products. Put a checkmark in **MAC Address** or **IP Range** to set the range for searching.

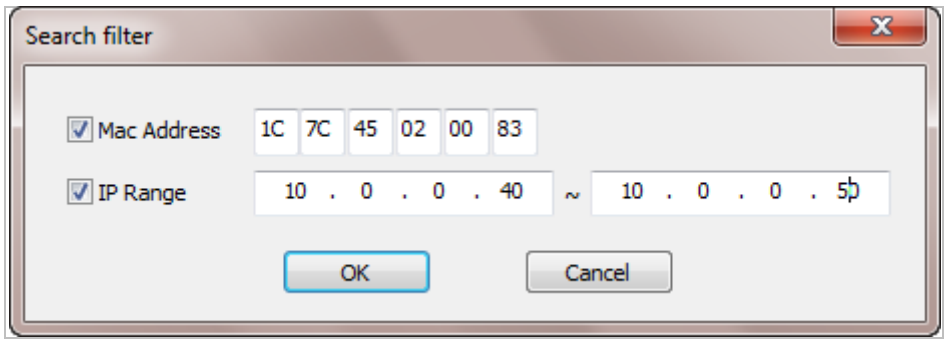
You can set the range of IP addresses to scan as shown below. In this example, all the IP devices having MAC address starting with 1C:7C:45 will be listed on the result window after scanning.

Or you can look for a single IP device having a specific IP address as below.

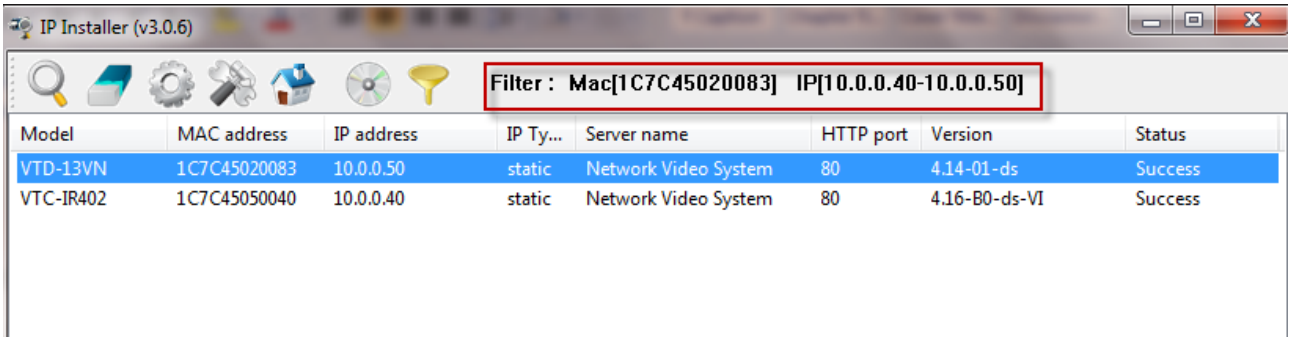


IP Address range for searching can be entered as follows.

You may even set both MAC Address and IP Range together at the same time.



After setting the searching range as explained above, click **OK** button. Then IP Installer program window will show the searching range on the top right portion of the window as shown below.

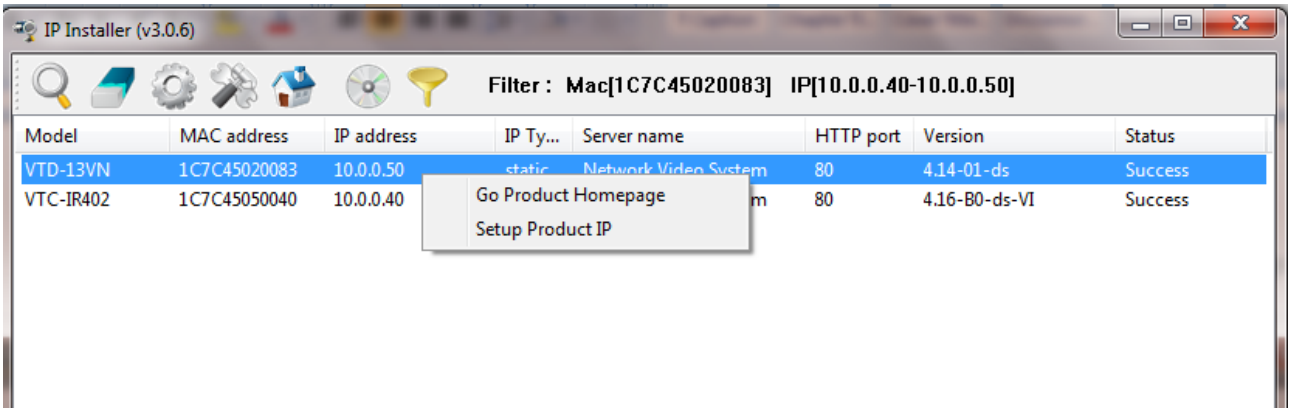


To start searching with this condition now, click **Search Product** button on the toolbar. The program will start searching and show the result after a moment.

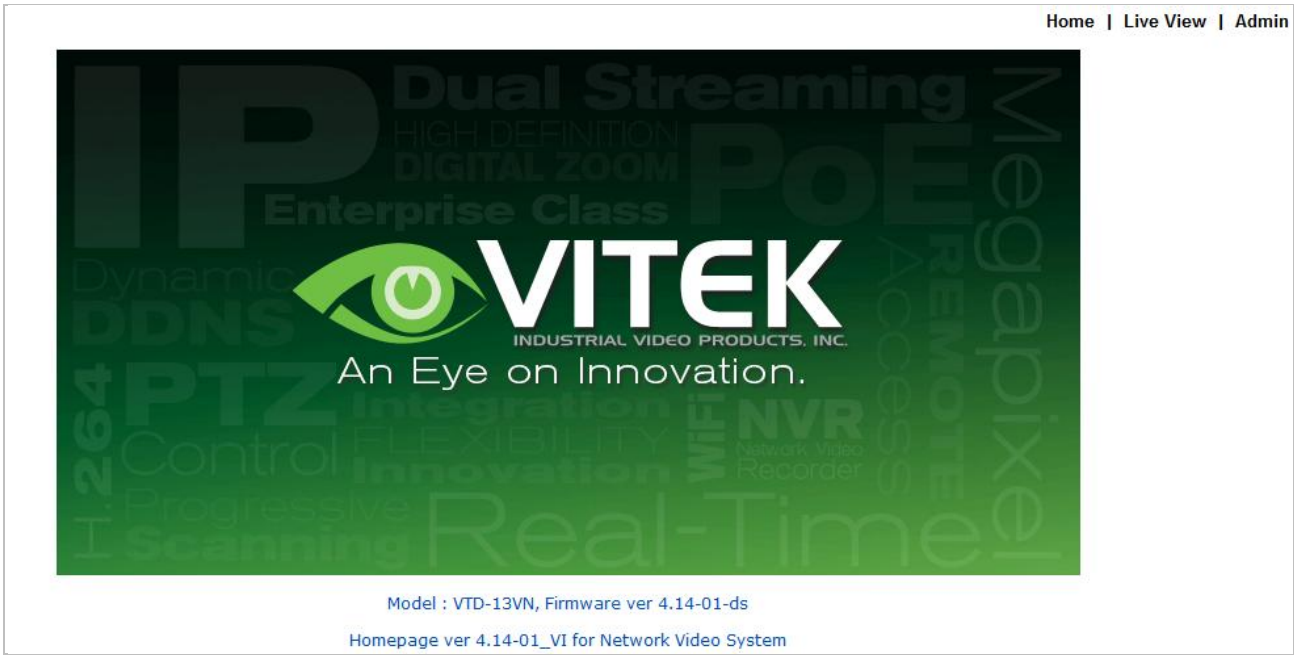
9.8. Live View

Once searching and configuration on IP devices are done, you should make sure that the IP devices are accessible with the new settings. The best way to do it is by connecting to the homepage of each IP device's built-in server, and starting Live View feature.

Select **Go Product Homepage** when you click the right mouse button on the IP device to test.



If you select **Go Product Homepage**, the homepage of that device's built-in server will be opened on a new Web browser window as shown below. This is the same result when you click Connect Product Homepage button from the Main Toolbar.



Click Live View on the top right of the window, then ENVI Series Viewer ActiveX program will be started. If you have not installed the ENVI Series Viewer program before, it will ask for a confirmation to install it. Allow it and you will be able to find out whether the configuration by IP Installer program is properly done.

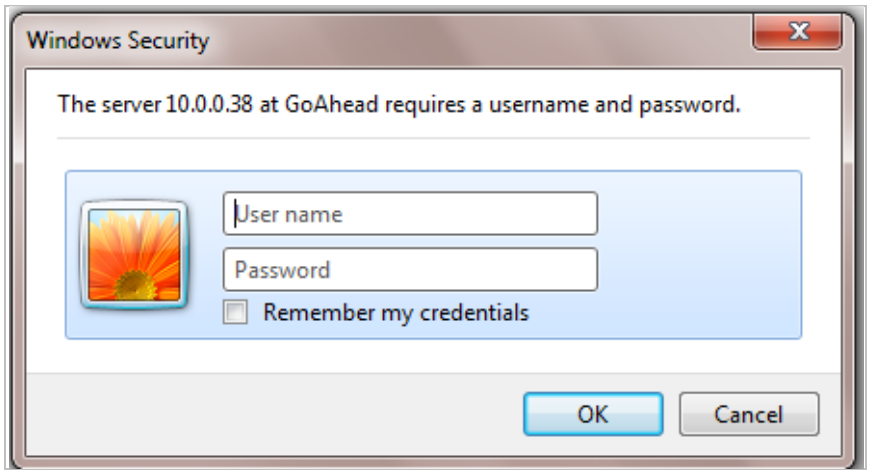
> *Note: Refer to* **Section 18.** *ENVI Series Viewer* **on page 100** *for detailed information about the ENVI Series Viewer ActiveX program.*

10. ENVI Admin Menu

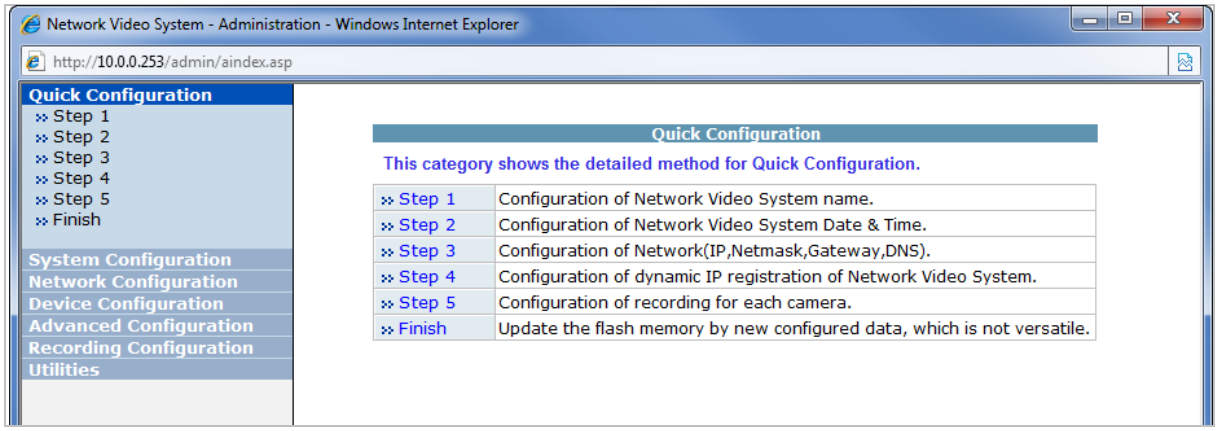
After connecting to a VITEK ENVI Series camera via web browser, you'll find the web page as shown below. The upper rightmost item of the menu is Admin; this is where you can set up most of the features in the VITEK camera you're connected to.

10.1. Entering Admin Menu

Click **Admin** then you'll see a login window. In the login window, enter **root** for both ID and password as they are the factory defaults. Press **Enter** key or click **OK**.



Now the **Admin Menu** will be displayed as shown below. This will guide you to the top level menu items, which are Quick, System, Network, Device, Advanced, Recording, and Utilities. Clicking any of these top level menu items will display submenu items and brief descriptions.

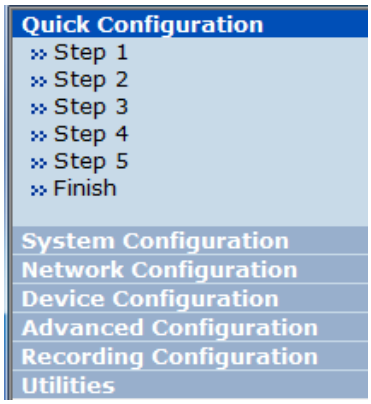

Network Video System - Administration - Windows Internet Explorer
http://10.0.0.253/admin/aindex.asp
Quick Configuration
» Step 1
» Step 2
» Step 3
» Step 4
» Step 5
» Finish
System Configuration
Network Configuration
Device Configuration
Advanced Configuration
Recording Configuration
Utilities
Quick Configuration
This category shows the detailed method for Quick Configuration.
» Step 1 Configuration of Network Video System name.
» Step 2 Configuration of Network Video System Date & Time.
» Step 3 Configuration of Network(IP,Netmask,Gateway,DNS).
» Step 4 Configuration of dynamic IP registration of Network Video System.
» Step 5 Configuration of recording for each camera.
» Finish Update the flash memory by new configured data, which is not versatile.

10.2. Admin Menu Structure

The following table shows the hierarchy of the Admin menu structure that we're going to deal with in this manual.

11. Quick Configuration

In Quick Configuration, you will be able to set up many of the essential parts of the configuration in a simple manner without going into details. Selecting Quick Configuration gives you the menu as seen below. You can perform each setup by clicking the one you would like to configure.



11.1. Step 1: Changing Server Name

Click Server Name on System Configuration menu, then Server Name Setup windows will be displayed. Refer to **Section 12.1 Server Name Setup on page 36** to see how to change the server name.

11.2. Step 2: Time Setup

Click Date & Time on System Configuration menu, then the Local Date & Time Configuration window will be displayed. Refer to **Section 12.2 Date & Time on page 37** to see how to set up.

11.3. Step 3: Network Setup

To make a connection to the Internet, it is required to figure out the type of the Internet service you're using. Refer to **Section 13.** Network Configuration **on page 40** to see how to set up.

11.4. Step 4: IPCCTVDNS.COM

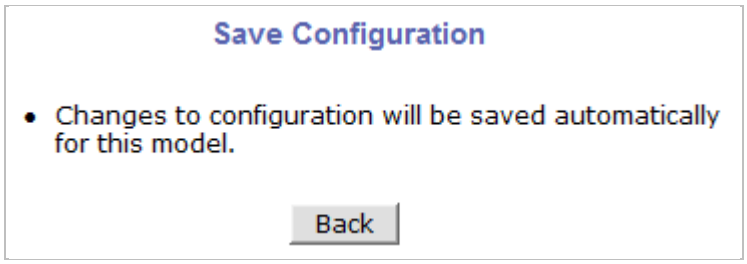
When VITEK Server is used in a Dynamic IP environment, it is required to utilize **IPCCTVDNS.com** feature. Refer to **Section 35.** IP-CCTV DNS Registration **on page 161** for setup information.

11.5. Step 5: Recording Configuration

Vitek cameras with MicroSD card can be configured for recording options in this section. Refer to **Section 16.1** SD / MicroSD Card Configuration **on page 89** to see how to set up.

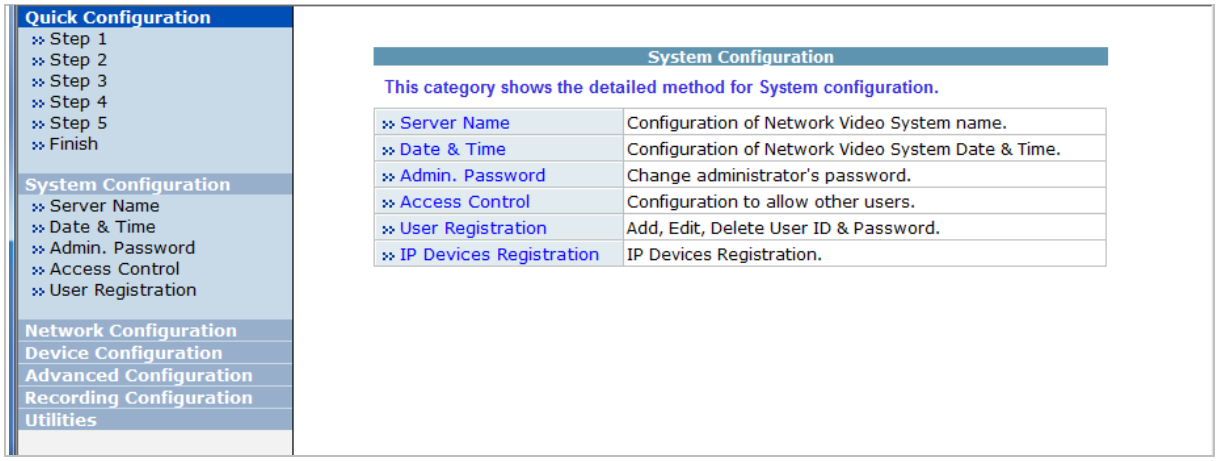
11.6. Finish

After clicking Finish all changes will be saved automatically to the camera/server



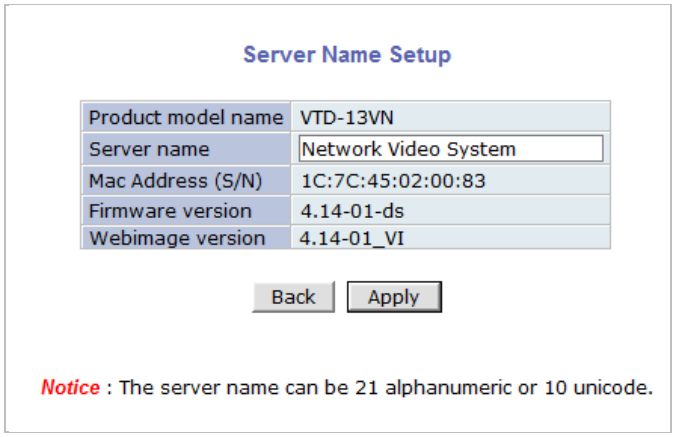
12. System Configuration Menu

When you click on **System Configuration** item on Admin Menu, the following sub menu will be displayed.



12.1. Server Name Setup

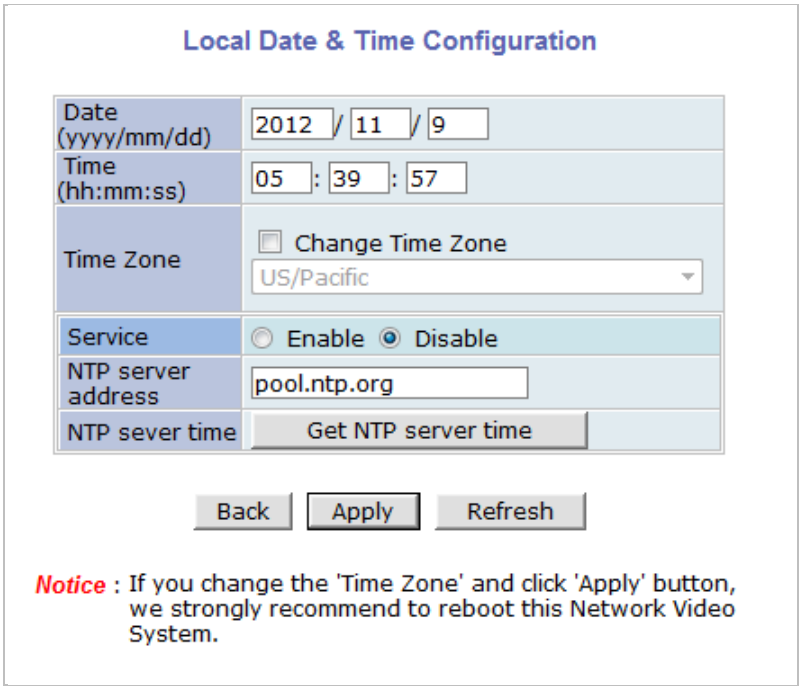
Click **Step 1** on **Quick Configuration** or **Server Name** under **System Configuration** then the following will be displayed and you will find out the system information such as model number of the VITEK camera, server name (camera name), MAC address (serial number), firmware version, and Web image version.



As an administrator, you can change the name of the camera/ server, but other values are not allowed to be changed. To change the camera/ server name, enter a new name in the **Server Name** field. You may use up to 21 alphanumeric or up to 10 Unicode characters. Tab or any other special characters are not allowed. Click **Apply** button to save the setting and it will take effect immediately.

12.2. Date & Time

Click **Step 2** on **Quick Configuration**. Or **Date & Time** under **System Configuration** Fill the **Date** and **Time** fields with your local time and date information. If you're in a different time zone, put a checkmark on **Change Time Zone**, then select the correct region from the dropdown list to make the time zone change, you need to click **Apply** button and reboot the system.



If you want to retrieve the exact current time from a NTP server on the network, click **Get NTP Server Time** button. Clicking **Refresh** button will display the date and time retrieved from the camera. Then click **Apply** button to save it.

Note: In order to retrieve Time and Date information from a NTP server, you need to put NTP server address in advance of setting up, such as pool.ntp.org.

12.3. Admin Password

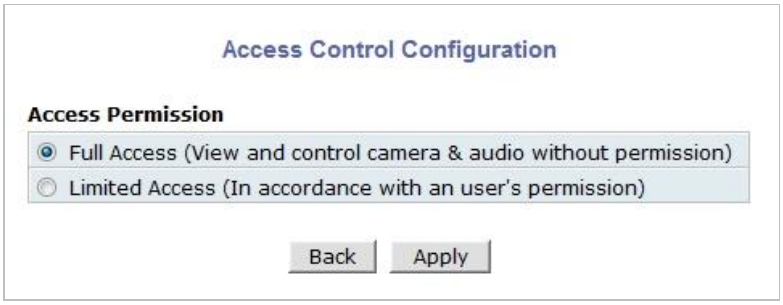
To change the password for the administrator, click **Admin Password** in **System Configuration** menu.

Default ID for admin account is fixed as "**root**" and is not allowed to change. In **Old Password** field, enter the current password. In both **New Password** and **Confirm Password** fields, enter the same new password. The password must be between 4 and 23 alphanumeric characters. Click **Apply** button to put it into effect.

Because you have replaced the password with a new one, the existing network connection made with old password to VITEK camera is lost now. You will have to reconnect to the VITEK camera using new password.

12.4. Access Control

Click **Access Control** on **System Configuration** menu. The following windows will be displayed.


Access Control Configuration
Access Permission
Full Access (View and control camera & audio without permission)
Limited Access (In accordance with an user's permission)
Back
Apply

From the **Access Permission** window, select either one you would like to use. Click **Apply** button to save the change.

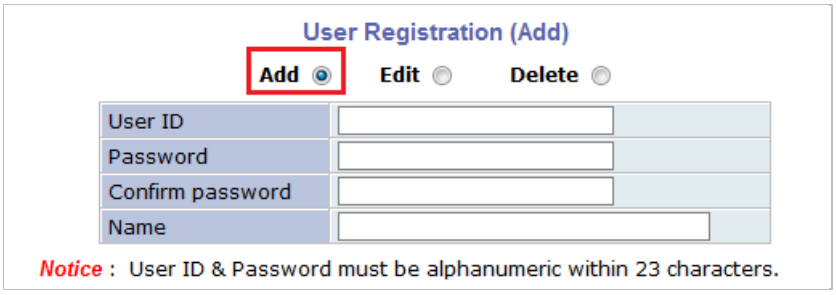
- **Full Access**: Any user can access the camera/server and use all the features without limits.
- **Limited Access**: Only registered users can access the camera/server and have limited privileges.

12.5. User Registration

You can add, modify, or delete users for your VITEK camera/server here. Once registered as Limited Access setting, the user can access the VITEK camera/server with some limited privileges.

12.5.1. Add

To add a user, click **User Registration** on **System Configuration** menu. When **Add** is selected, you can add users and define their passwords, names, and access permission levels respectively.

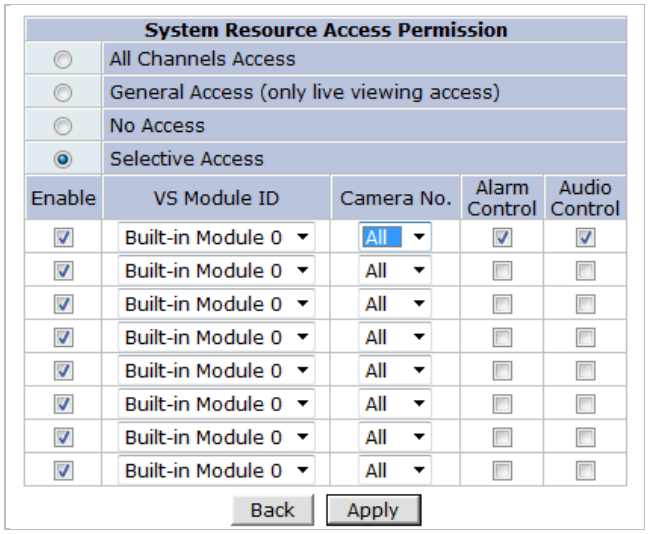


Enter a **User ID** between 4 and 23 alphanumeric characters. In both **Password** and **Confirm Password** fields, enter the identical password respectively. The password must be between 4 and 23 alphanumeric characters. In **Name** filed, enter the user's name up to 23 alphanumeric characters.

Now select one of the four items from **System Resource Access Permission**, which defines the permission level for registered users to the VITEK camera.

- **All Channels Access**: User can use all the features except for Configuration in Admin Page.
- **General Access (only live viewing access)**: User can only use Live View feature.
- **No Access**: User is not permitted any of the features.
- **Selective Access**: User is allowed to use only the selected features. With this item selected, you can now configure the details under this menu for the user.

VITEK cameras may have multiple VS Modules registered in it. When you click on any of the **Enable** check boxes, other fields in that row are now enabled to select.

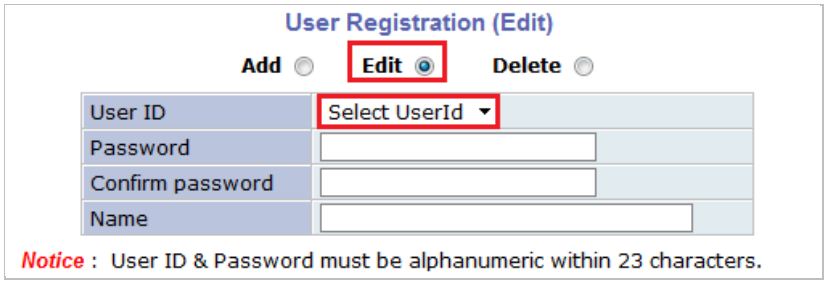


- **VS Module ID**: VS Module is a network device that has been registered in the VITEK camera
- **Camera No.**: Among the cameras of the VS Module select one to set up. (between all,1or2)
- **Alarm Control**: Determine if Alarm control is to be allowed. *(selected models)*
- **Audio Control**: Determine if Audio Control is to be allowed. (*selected models)*

After finishing the registration process, click **Apply** button to add the user.

12.5.2. Edit

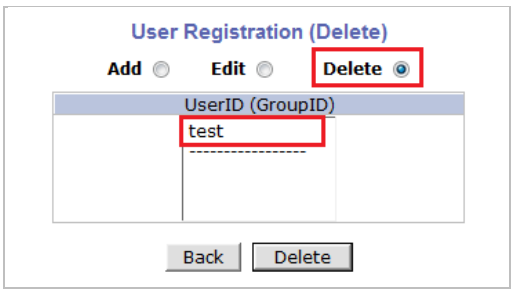
To edit a user account, select **Edit**. In this part, you can modify the existing user's name, password, and access permission. User ID is not allowed to change. Once selecting a user ID to edit, the procedure is the same as in **Add** section.



To see existing users, click **Select UserId**, and select a user to be edited from the dropdown box. Then you can change the password, name, or access permission, and click **Apply** button to save the setting. Setup of Access Permission can be done the same way as in the **Add** section.

12.5.3. Delete

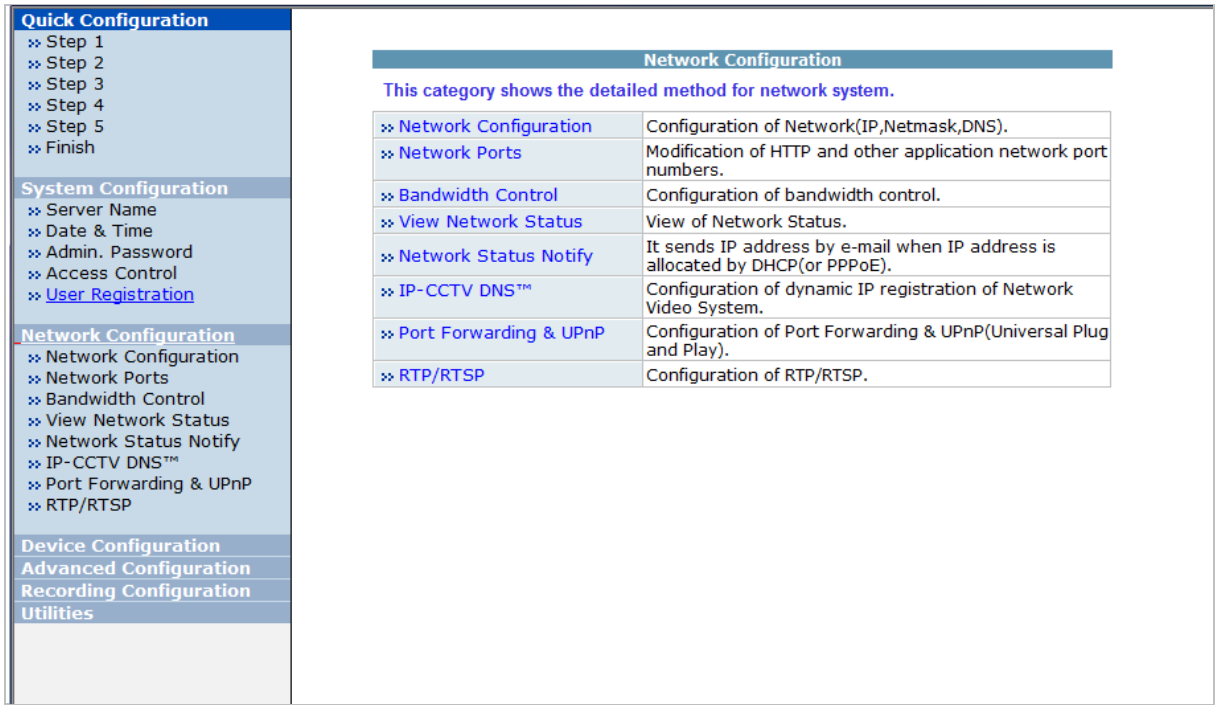
To delete an existing user, select **Delete**.



From the list of the users, select a user to delete. Click **Delete** button to confirm the deletion.

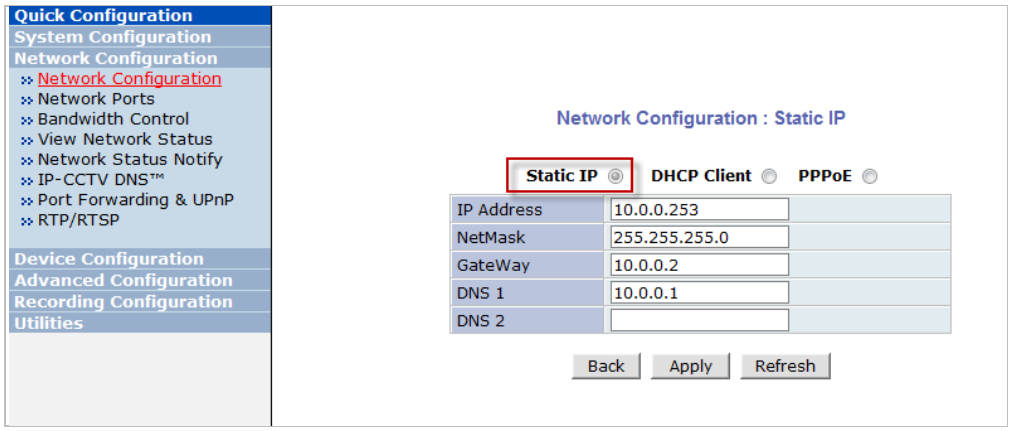
13. Network Configuration

Configuring the network is dependent on how an IP address is assigned in Ethernet-based environment, which is static IP, dynamic IP (DHCP), or PPPoE.



13.1. Static IP Configuration

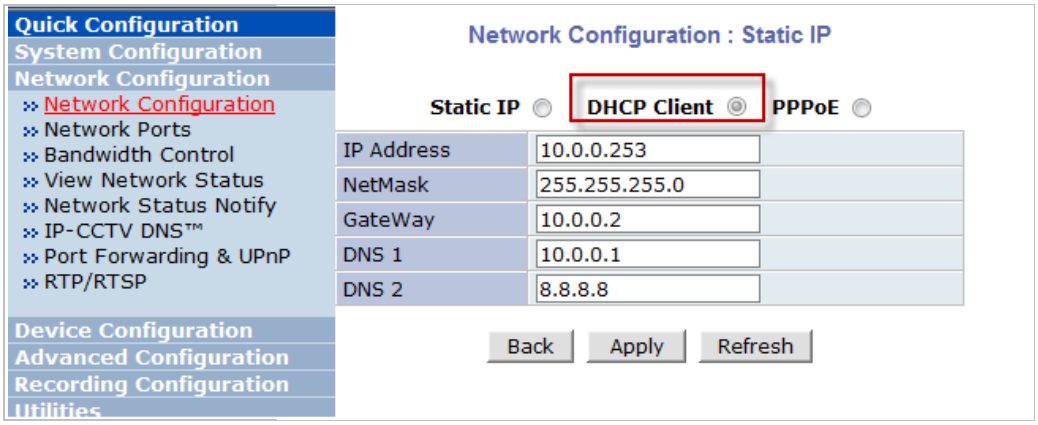
Select **Network Configuration** under **Network configuration**



For static IP, select **Static IP** and input IP address, NetMask, Gateway, DNS1, DNS2 and click apply to save settings. After **apply**, program will ask to close web browser for updates, which will take 20~30 seconds. If **Back** button is clicked all values will be discarded. If **Refresh** button is clicked, the program will load previous values.

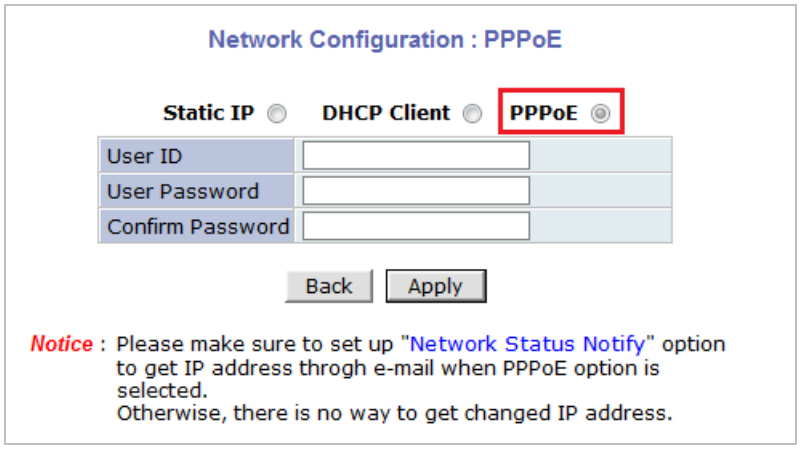
13.2. DHCP Client Configuration

To use DHCP a DHCP server must exist in the network environment. Select **DHCP Client** from **Network Configuration,** click **Apply**. And all information needed will be filled in automatically



13.3. PPPoE Configuration

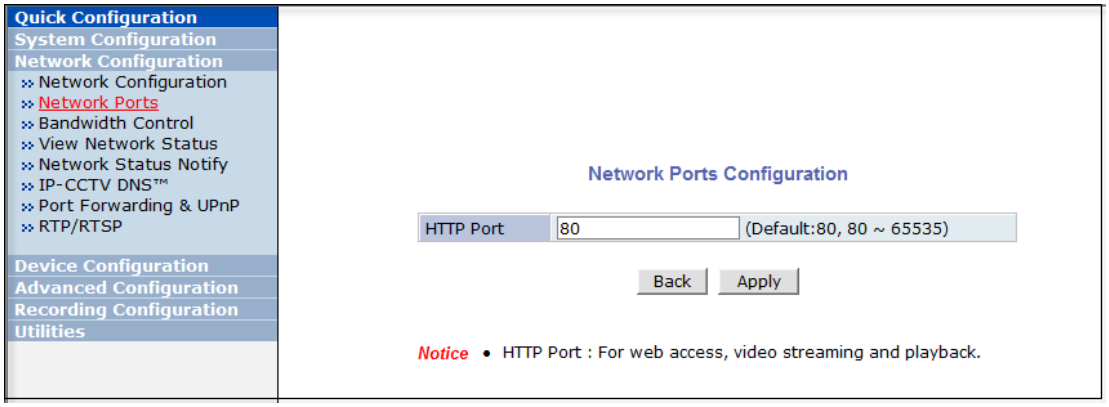
PPPoE is used to connect VITEK products to a PPPoE modem provided by the ISP. Since PPPoE needs verification, ID and a password are necessary to access the network. Type in PPPoE user ID and password


Network Configuration : PPPoE
Static IP
DHCP Client
PPPoE
User ID
User Password
Confirm Password
Back
Apply
Notice : Please make sure to set up "Network Status Notify" option to get IP address throgh e-mail when PPPoE option is selected.
Otherwise, there is no way to get changed IP address.

13.4. Network Ports

In this configuration, you set up the HTTP port for VITEK cameras to communicate with the Client PC. HTTP Port is the network port that is used when a Client PC connects to the VITEK camera Web page. It can be assigned between 80 and 65535.The default value is 80.

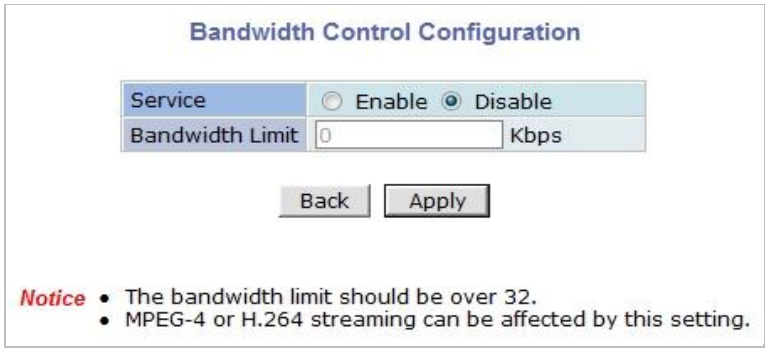
Note: If the HTTP port number is changed to a different value than default (80), make sure the new HTTP port number goes together with the VITEK cameras IP address. For example, when a VITEK cameras IP address is 192.168.1.100 and the HTTP port is 8080, you will have to enter http://192.168.1.100:8080 to connect to the camera.



13.5. Bandwidth Control Configuration

Bandwidth control is for limiting maximum network traffic. If it is enabled with Bandwidth limits, maximum data size transferred from VITEK cameras won't exceed bandwidth limits set by users. If transferred data is exceeded, part of the data will be randomly lost.

If multiple users try to access a VITEK camera when bandwidth control is enabled, users connected to the VITEK camera will share network bandwidth limit.

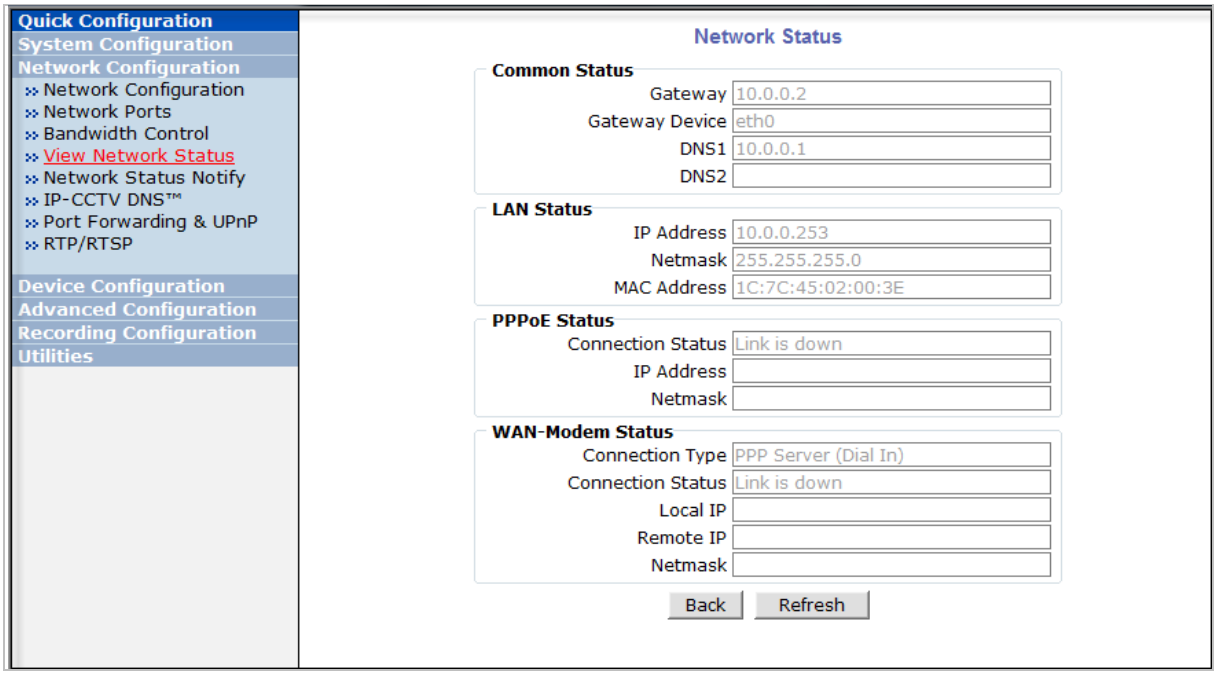


Note: This bandwidth control feature works well in M-JPEG video transmission. But, for H.264, dropping data packets may cause low quality of video, so it is recommended to utilize CBR and frame rate control instead of bandwidth control for H.264 video. Refer to **Section 14.2** *Camera & Motion* **on page 51** *for more info on CBR and Frame rate.*

Note: Network Bandwidth control is managed by the VITEK camera and it drops any data packets if required, thus you may experience slow connection when this feature is enabled.

13.6. View Network Status

This menu shows network status of VITEK cameras.



13.7. Network Status Notify

This feature helps to send updated network status information to registered email address if any changes happen. This function will work under DHCP or PPPoE.

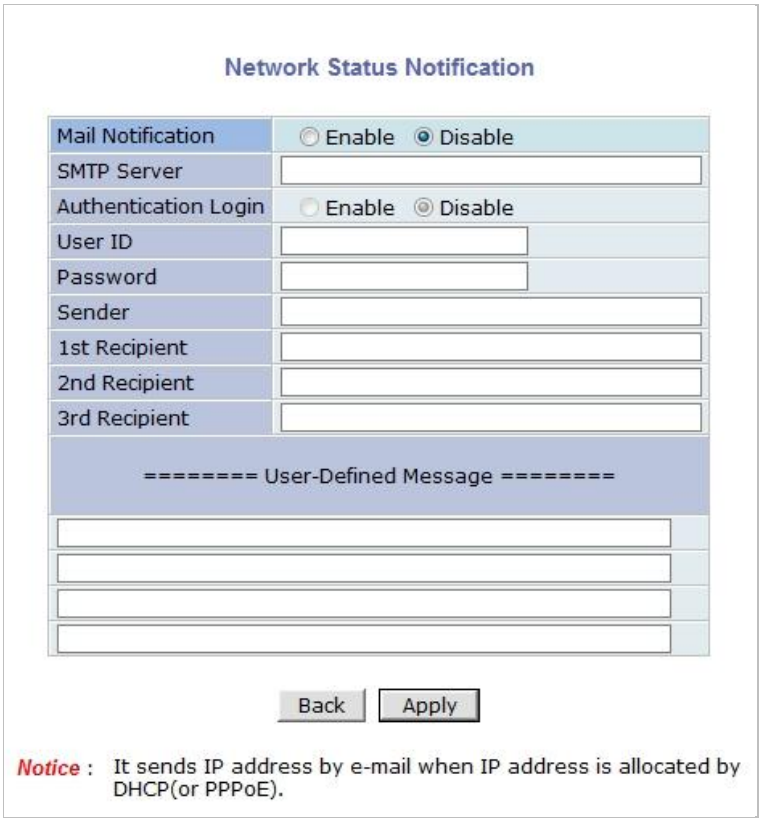
If **Network Status Notify** is set to **Enable**, VITEK cameras network status will be emailed to a specific person in case of the following events:

- When it is set to Dynamic IP in the **Network Configuration** menu, and the VITEK camera has been given a new dynamic IP address and connects to the network.

Or,

- When it is set to PPP Client on WAN-Modem menu, and the VITEK camera has been connected to the network with ISP or PPP server.

To configure, click **Network Status Notify** on **Network Configuration** menu. The following window will be shown.



First, select **Enable** to use the feature. Then enter the address of the SMTP server which is needed for email service. If your SMTP server requires a user ID and a password for authentication, you will have to Enable **Authentication Login** and enter the user ID and Password.

In **Sender** field, enter your email address or other meaningful words that will show the message was sent from the VITEK camera as a notification. Now enter the email addresses of the recipients in the **Recipient** fields, up to 3 addresses. In the **User-Defined Message** box, you may enter a message to explain why the message was sent. After finishing the setup, click **Apply** to save settings.

Mail Notification	**Enable**: Send email **Disable**: Do not send email
SMTP Server	SMTP Server address for email service
Authentication Login	**Enable**: user ID and password are required for SMTP server **Disable**: user ID and password are not required
User ID	User ID for SMTP server
Password	Password for SMTP server
Sender	Email address of Sender or Name
1st / 2nd / 3rd Recipient	Email Addresses of the Recipients (up to 3 addresses)
User Defined Message	Message to be included in the Notification email

13.8. IP-CCTV DNS Setup

Note: Refer to **Section 35.** IP-CCTV DNS Registration **on page 161** for further details on configuration.

IP-CCTV DNS service provides a static & public domain name to help user's access VITEK cameras even though their IP address has changed or they are used in a local network. For proper function of IP-CCTV DNS service, products need to be accessible through the internet.

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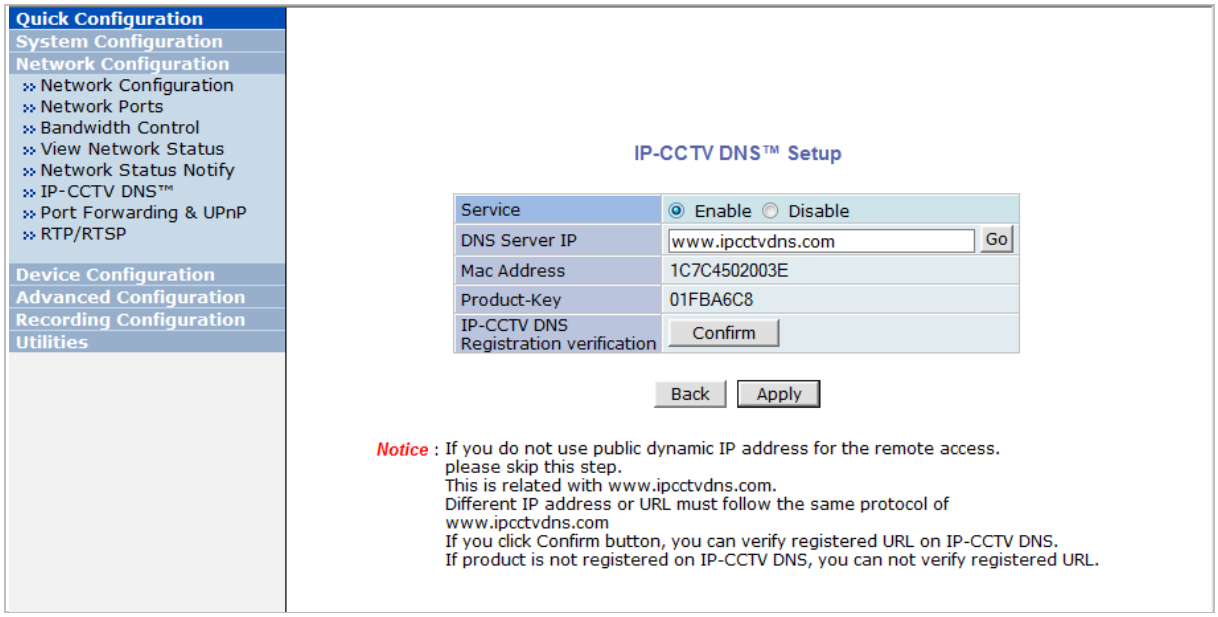


13.9. Port Forwarding & UPnP

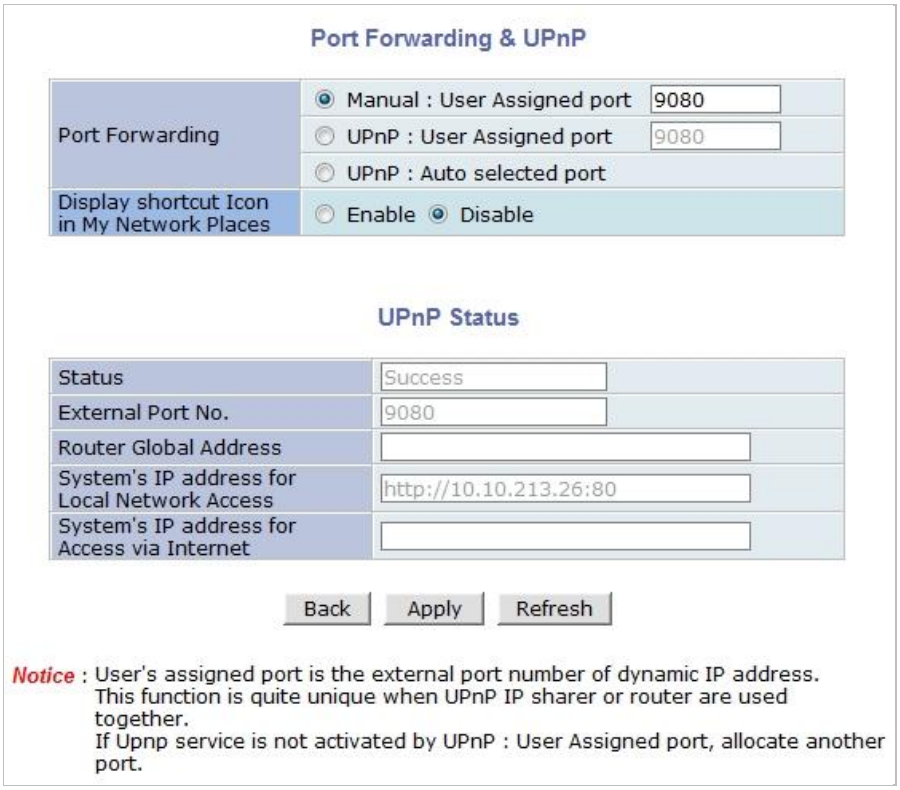
UPnP(Universal Plug and Play)is a kind of network protocol to help users to find and configure network products in the same local network area. Port forwarding is to assign a certain network port to a network product so users can access it from outside of the Local Area Network. Generally, port forwarding can be configured from the network router.

UPnP port forwarding is made up with finding an available network port, assigning it to a VITEK camera and reporting overall network configuration of a VITEK camera to IP-CCTV DNS server. Users have to register products into IPCCTVDNS server and IP-CCTV DNS service should be enabled.

There are 3 options in UPnP Port Forwarding.

- **Manual: User Assigned Port** issued when users can access network router (hub) and manually assign available network ports to VITEK cameras. In this case, users have to type already-assigned network ports under **User Assigned port.**
- **UPnP: User Assigned Port** is used when users want VITEK cameras to configure port forwarding of network hub with user-assigned network port. If it fails, try to change user-assigned port
- **UPnP: Auto Selected Port** is used to let VITEK cameras deal with all network configurations automatically.

Please note that the network router needs to support UPnP Port Forwarding. There is a limit for the maximum number of UPnP devices. If it is properly configured, results will be displayed under **UPnP status**.


Port Forwarding & UPnP
Port Forwarding
Manual : User Assigned port 9080
UPnP : User Assigned port 9080
UPnP : Auto selected port
Display shortcut Icon in My Network Places
Enable Disable
UPnP Status
Status
Success
External Port No.
9080
Router Global Address
System's IP address for Local Network Access
http://10.10.213.26:80
System's IP address for Access via Internet
Back
Apply
Refresh
Notice : User's assigned port is the external port number of dynamic IP address.
This function is quite unique when UPnP IP sharer or router are used together.
If Upnp service is not activated by UPnP : User Assigned port, allocate another port.

13.10. RTP/RTSP Setup

Factory default is Enable to be used with other manufactures VMS software's

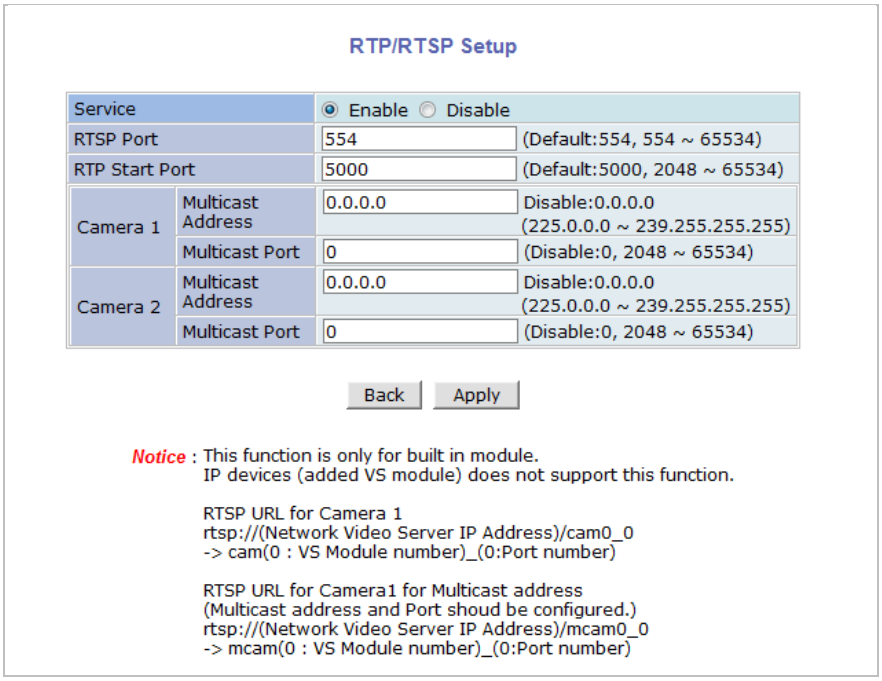
RTSP (Real-Time Streaming Protocol) is a protocol to transfer video and audio streams over the network. Any application supporting Standard RTSP can be used for VITEK cameras. Quick Time Player or VLC program can be used with this; it may not be supported in the environment within a firewall. There are two types of usage; one for Unicast address condition and the other for Multicast address condition.

For Unicast Address:

Use "**rtsp://network video server ip address/cam0_0**". If there are multiple channels, use cam0_x, x (0~3) with each number applied. If there are multiple modules, use camx_0 x (0 ~ 3) with each module number applied.

For Multicast Address:

Use "**rtsp://network video server ip address/mcam0_0**". If there are multiple channels, use mcam0_x, x (0~3) with each channel number applied. If there are multiple modules, use mcamx_0 x (0 ~ 3) with each module number applied.



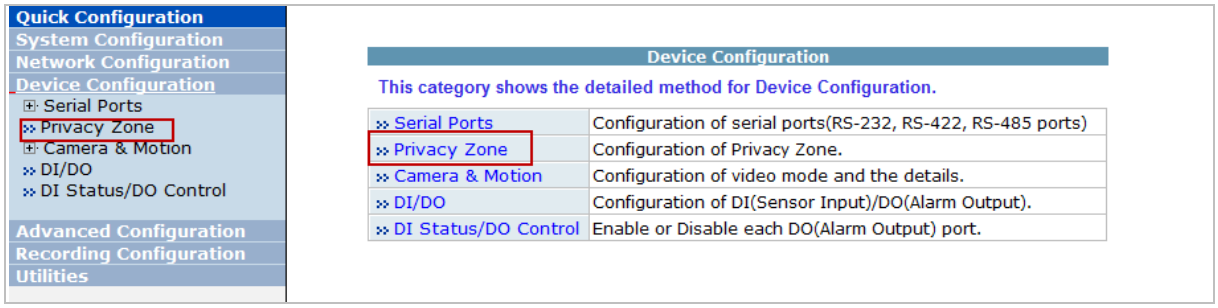
Service	**Enable**: Start RTSP service **Disable**: Stop RTSP service
RTSP Port	In normal case, use default port number 554 to connect to RTSP service. If not using port 554, enter the port number you want to use. e.g.) port number 445==>rtsp:// network video server ip address:445/cam0_0
RTP Start Port	The starting number of the port for video transfer. Each time video transfer connection is made, the port number also increases.
Multicast Address	Address for multicast video transfer. The multicast address 0.0.0.0 is for stopping multicast.
Multicast Port	Port number for viewing the video with a multicast address

14. Device Configuration

14.1. Privacy Zone

Users can set a privacy zone if a certain part of the screen needs to be unmonitored.

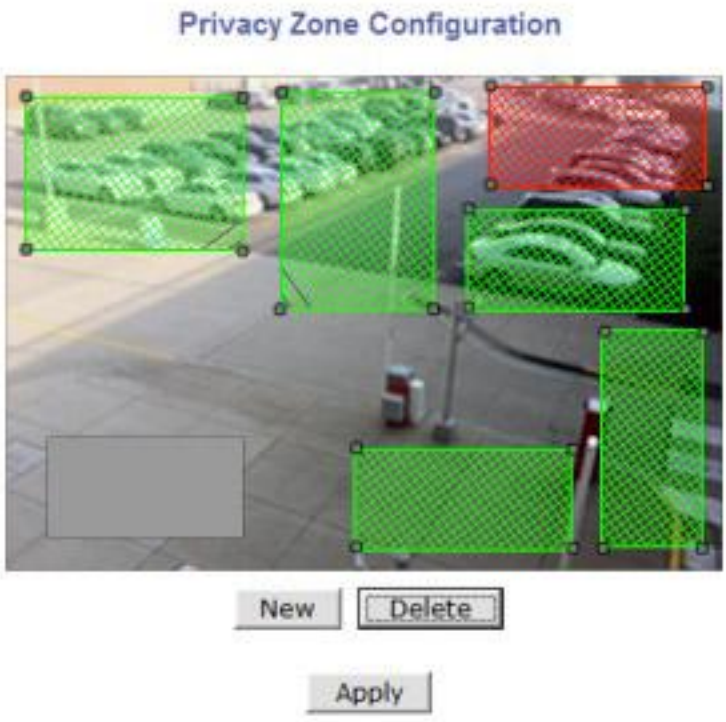
To set the region, click **Privacy Zone** from **Device Configuration** category.



To Add a Privacy zone click **New** button, a Green-colored box will appear, click on the Green box and it will turn Red, at this point you can resize it by clicking and holding any corner and drag to desired size. To relocate box click and hold anywhere inside the box and drag to desired location. Click **Apply** when done

Users can add up to 8 Privacy Zones per screen by repeating above steps. If you add more than 8, an error message will display on the screen.

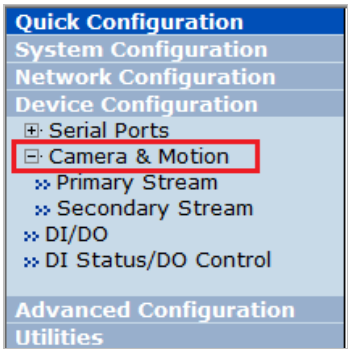
To delete a privacy zone, click the zone and click **Delete** button followed by **Apply** button.



14.2. Camera & Motion

This menu is used to set up the selection of video format, data added to video data, encoding speed, audio control, image resolution, video quality, motion detection, etc.

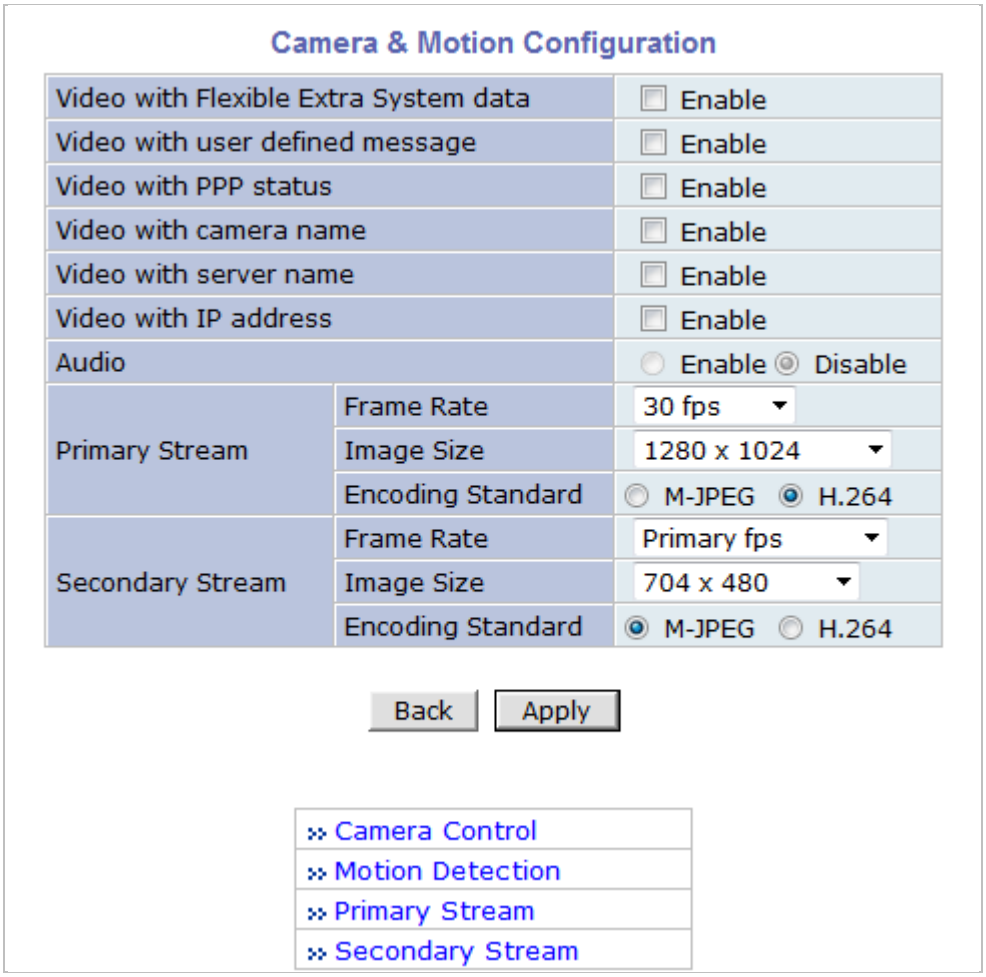
Click **Camera & Motion** on **Device Configuration** menu. The configuration menu will be displayed, and it may be different between VITEK cameras.



- **M-JPEG**: This format requires much higher network bandwidth than H.264 compression. But because of its higher quality of still image, it is adequate for detailed reviewing of stored video.
- **H.264**: In this format, each frame data is related to other nearby frames. For this reason, it provides much higher compression ratio than M-JPEG and is adequate for video transfer. However, if network conditions are limited dropped frames in video data is possible, the video quality can be relatively low. With VITEK Cameras, you can set the number of P-frames in the video which is independent still images between I-frames.

> *Note: For Dual Stream products, most of the parameters are dependent on primary stream value.*

You can configure the video data format and other information to be contained in it.



- **Video with Flexible Extra System data**: If **Enabled**, video data will contain UART sensor data from COM port. .*(Feature not available on this model)*
- **Video with user defined message: If Enabled, v**ideo **data wi**ll contain the user-defined data. (Reserved Field) .*(Feature not available on this model)*
- **Video with PPP status**: If **Enabled**, video data will contain PPP connection status. .*(Feature not available on this model)*
- **Video with camera name**: If **Enabled**, video data will contain the camera name. .*(Feature not available on this model)*
- **Video with server name**: If **Enabled**, video data will contain the server name that you defined. .*(Feature not available on this model)*
- **Video with IP address**: If **Enabled**, video data will contain the IP address of the video server. .*(Feature not available on this model)*
- **Audio**: (not available on all models) Select if Audio function is to be used (applies to Primary Stream only). VITEK Cameras provides 2-way audio streaming by combining microphone input with video data. Users can listen to the streamed audio through a PC and speakers.
- **Frame Rate**: For Primary Stream, this is the number of frames compressed in every second. You can control the network traffic with this parameter. For Secondary Stream, it can be set to a manner of 1/2, 1/4, 1/8... of the primary stream.
- **Image Size**: Select the resolution of each channel's video
- **Encoding Standard**: Select the compression method of each video, either M-JPEG or H.264 format. It is not allowed to set both channels to M-JPEG.

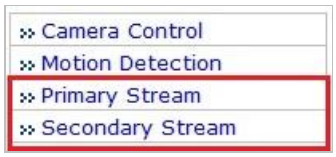
Below is the table of images sizes. To save the setting, click **Apply** button

Video Format	SXGA	D1	CIF	QCIF

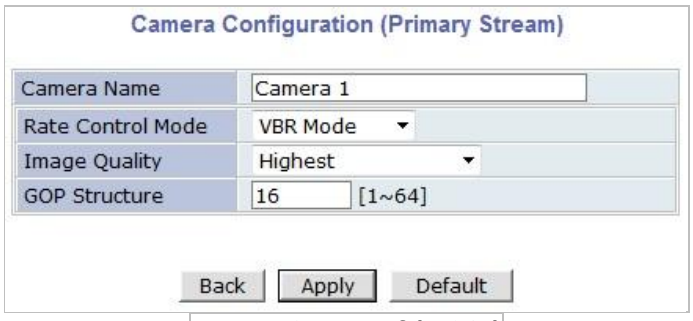
NTSC	-	704 x 480	352 x 240	160 x 112
PAL	-	704 x 576	352 x 288	160 x 144
VGA	-	640 x 480	320 x 240	160 x 112
1.3M Pixel	1280 x 1024	640 x 480	320 x 240	160 x 112
2.0M Pixel	1920 x 1080	640 x 480	320 x 240	160 x 112

14.3. Camera Configuration

On the lower part of **Camera & Motion Configuration** menu, select a channel to configure.



In the example shown below, Primary Stream is set to **H.264** for compression format. Enter detailed parameters of the camera selected here.



Primary Stream of (H.264)

- **Camera Name**: Enter the name of the channel up to 21 alphanumeric or up to 10 Unicode characters.

H.264	**Rate Control Mode**: VBR (Variable Bit Rate) Video frames are encoded with selected image quality and GOP. Encoded frames have different data size from each other.	**Image Quality**: one of 6 quality levels (Low Compression / Highest /High Normal / Low / Lowest)
		GOP Structure: Distance between I-Frames. That is filled with P-frames.
	Rate Control Mode: CBR (Constant Bit Rate) Video frames are encoded with selected image quality and GOP. Encoded frames have the same data size as other frames. Due to the constant bit rate, it has better stable transmission performance.	**Bit Rate Control:** Total number of Bits encoded per second. The higher Bit Rate, the better image quality. Can be set between 32kbps and 2Mbps.
		GOP: Distance between I-Frames. That is filled with P-frames.
M-JPEG	-	**Image Quality:** one of 6 quality levels (Low Compression / Highest / High Normal / Low / Lowest)

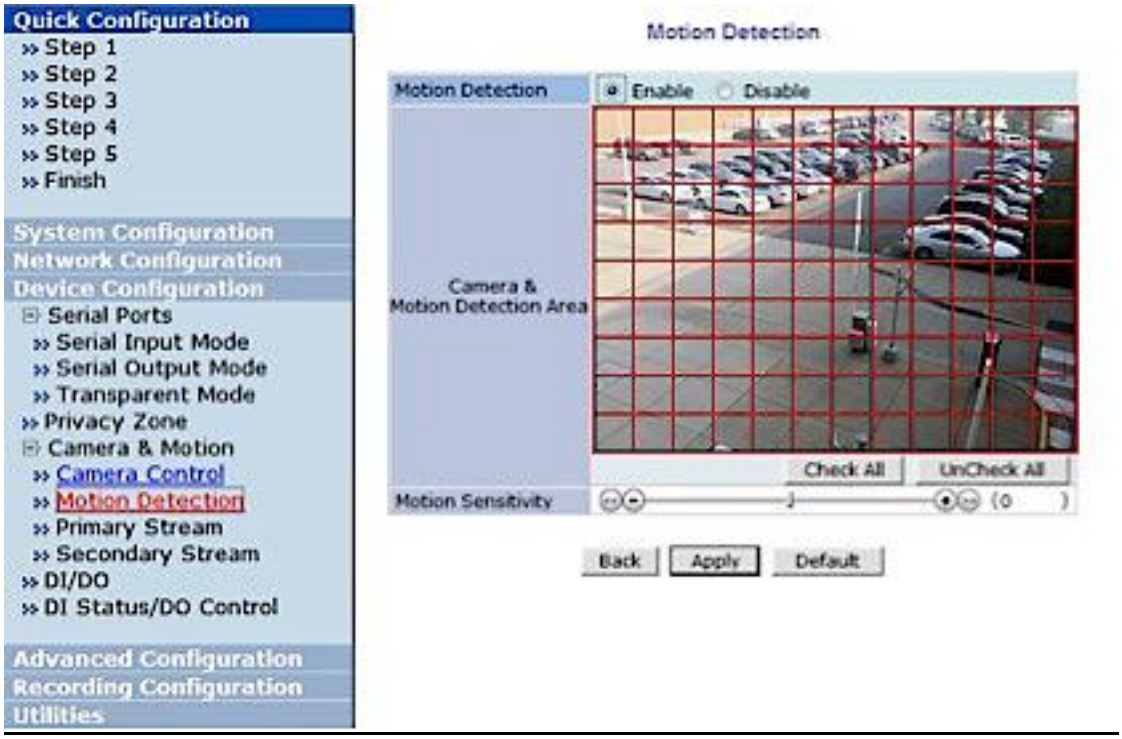
14.3.1. Rate Control Mode

14.3.2. Image Quality Setup

In **Image Quality** level setup, select "Low Compression" for higher image quality, but it requires higher network bandwidth. Selecting the "Lowest" requires lower network bandwidth, but gives decreased image quality.

After configuration is finished, click **Apply** button to save the setting. If you click **Default** button, the entire configuration will be reset to the original values.

Motion Detection

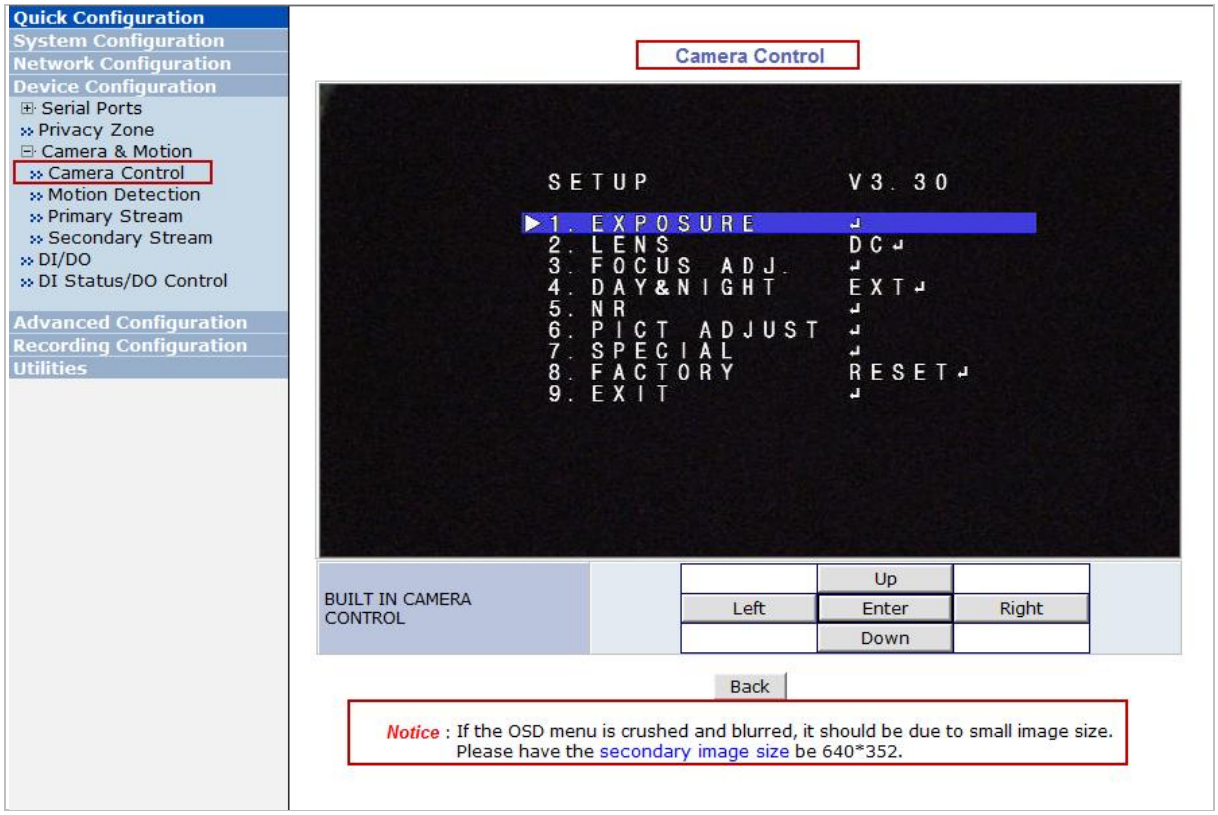


- **Motion Detection**: (this is only available in Primary Stream) If enabled, Motion Detection feature is activated and user can configure the areas where motion detection function will work. Click **Check All** button for whole scene to be active (grid will turn Green) then click on any box inside scene to take out that area from Motion Detection (box will turn Red) then click **Apply** to save
- **Motion Sensitivity**: Set the sensitivity of motion defined in Motion Detection Area. Select between -100 and 100. 100 is the most sensitive.

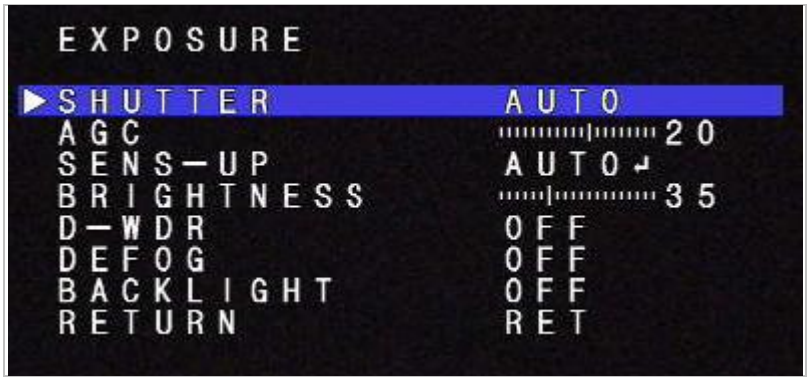
After all the settings are done, click **Apply** button to save it. If **Default** button is clicked, all the fields return back to original value.

14.4. Camera Control (Select Models)

Select **Camera Control** on the bottom of **Camera & Motion Configuration** menu.



Exposure



3 SHUTTER/AGC menu

This menu shows how to control/select SHUTTER, AUTO IRIS and AGC to get the optimum image for high luminance and the low luminance according to the scene.

For example, to reduce the "wash out" and extend the dynamic range for a highlighted scene, you will use SHUTTER+AUTO IRIS in outdoor daylight. This mode may show color rolling or video level hunting problems in a certain lighting condition such as fluorescent lights.

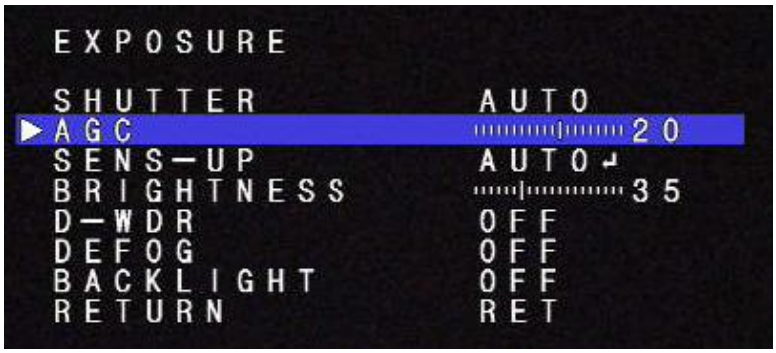
For Flickerless mode which reduces flicker by NTSC cameras under 50Hz light or PAL camera under 60Hz light, MAIN>SHUTTER/AGC>MANUAL>SHUTTER must be set to 1/100(NTSC), 1/120(PAL) and MAIN>SHUTTER/AGC>AUTO>MODE to AUTO IRIS. Normal shutter speed with an auto iris lens should be set to 1/60(NTSC) and 1/50(PAL) for the optimum sensitivity.

This is a complicated menu so please proceed with care when handling the Shutter.

AGC (Automatic Gain Control)

The higher the gain level, the brighter the screen - but the higher the noise.

You can adjust the AGC manually

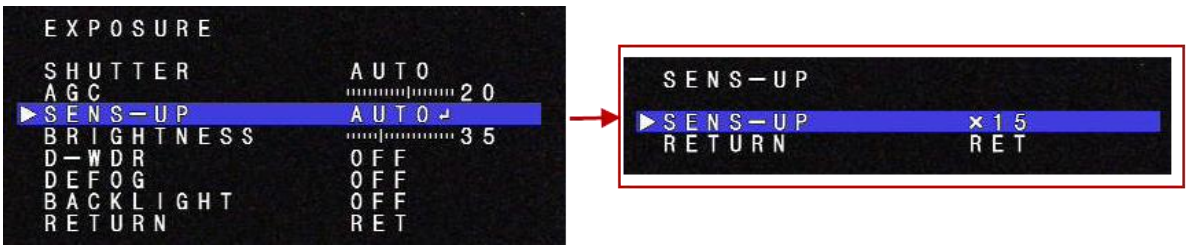


SENS –UP

Allows color video in low light environment without noise (static).

Levels of adjustment (x2, 4, 6, 8, 10, 15, 20,30)

If set to high ghosting may appear



Brightness

Increases or decreases the brightness of the picture.
This is different from that of DC iris lens and simply increases or decreases the digital gain of the video.
Do not increase this too much, the dynamic range for the highlight area will decrease.

D-WDR

The Wide Dynamic Range feature improves the overall picture balance beyond the Backlight Compensation feature. It creates an optimal balance of brightness and color by combining images from a bright area (high shutter speed) and images from a dark area (low shutter speed).

You can select (OFF, Low, Middle, High)

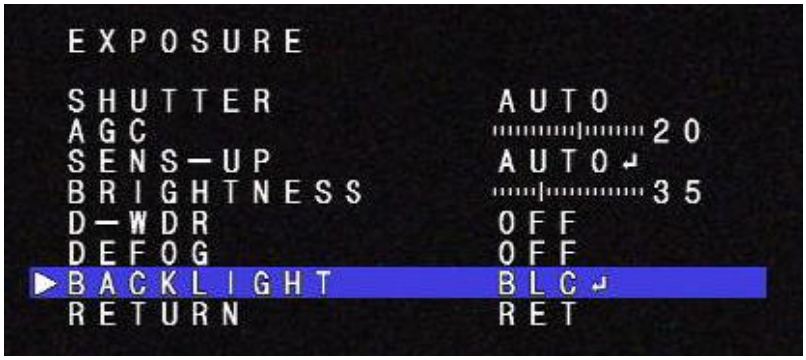
DEFOG

Enhances image in foggy weather. (The performance is very limited)

You can select (OFF, Low, Middle, High)

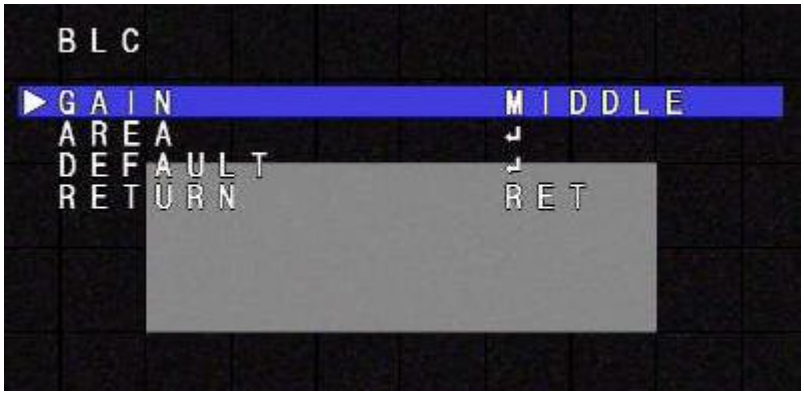
BACKLIGHT>>*BLC*

When there is a strong backlight behind the object, clear images of the background as well as the object can still be obtained by using the BLC function.



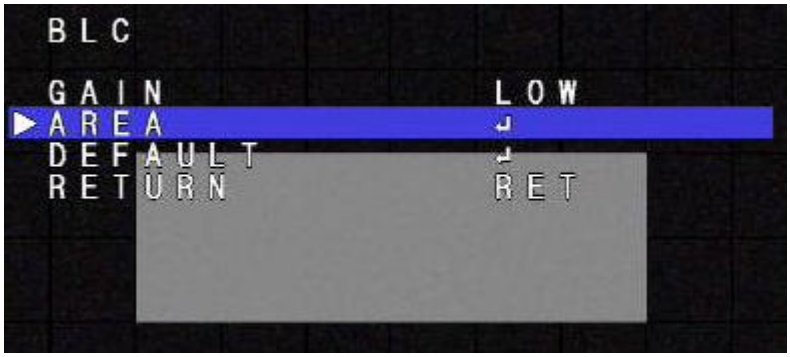
GAIN

Adjusts the amplification of the video through Low, Middle and High levels



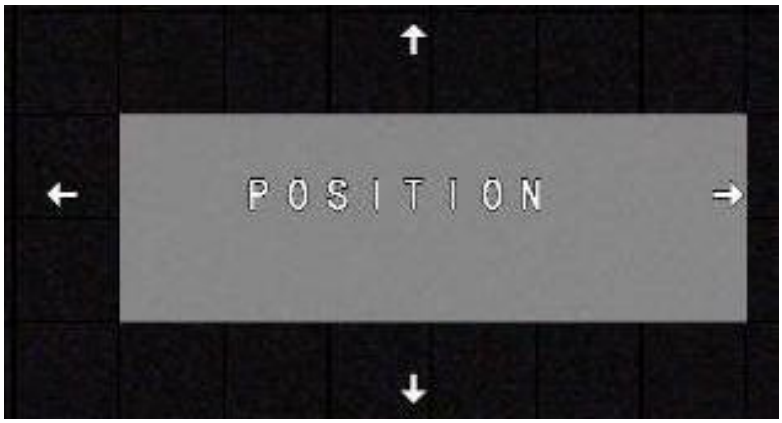
AREA

To adjust the Area where "BLC" is relevant.



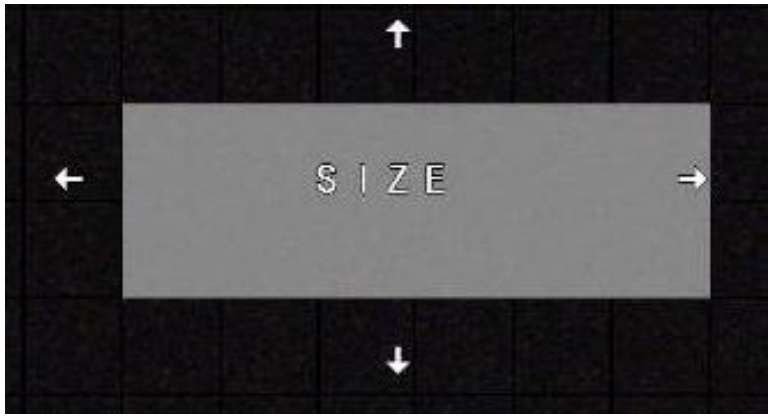
Position

Position the shaded area by using UP/DOWN/LEFT/RIGHT arrows, then click **ENTER**



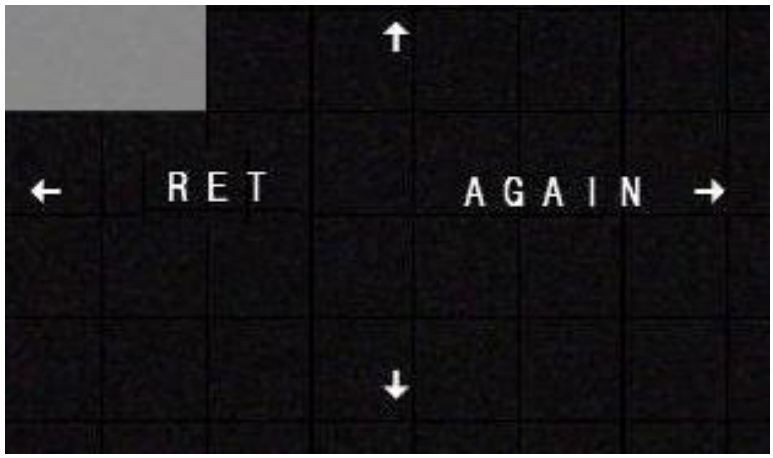
SIZE

Change the Size using UP/DOWN/LEFT/RIGHT arrows, then click **ENTER**



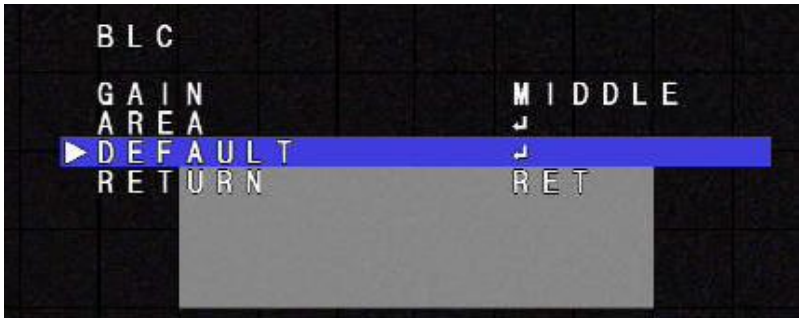
RET

Return to Exposure Menu or select arrow right to AGAIN to redo area.



DEFAULT

Default the settings from BLC



Return

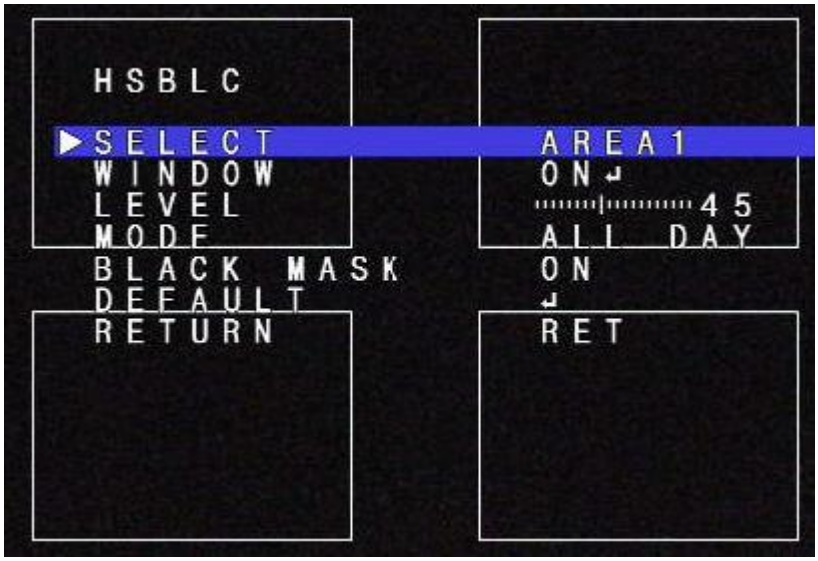
Return to the Exposure screen

BACKLIGHT >>*HSBLC*

This function is to prevent against the intense light from washing out the picture, such as headlights from a vehicle.

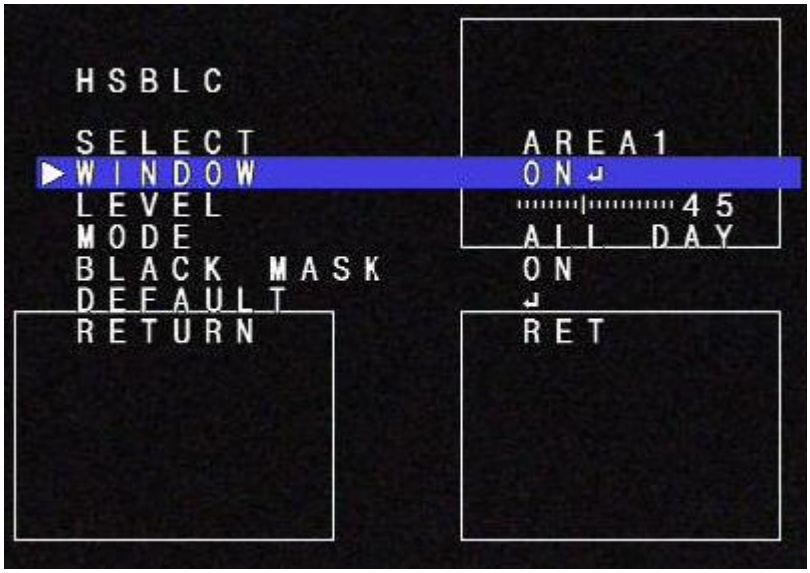
SELECT AREA 1

You can select area 1 thru 4 by clicking right or left button.



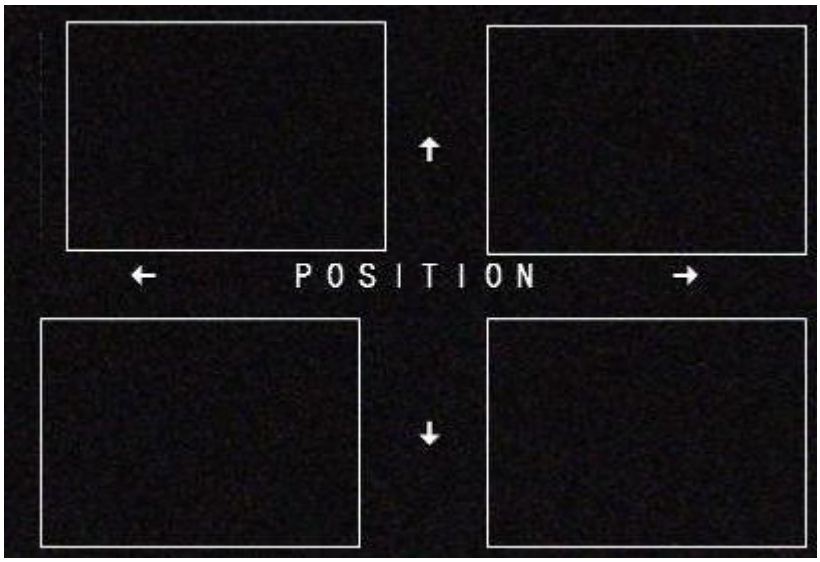
WINDOW

After selecting Area, select window on



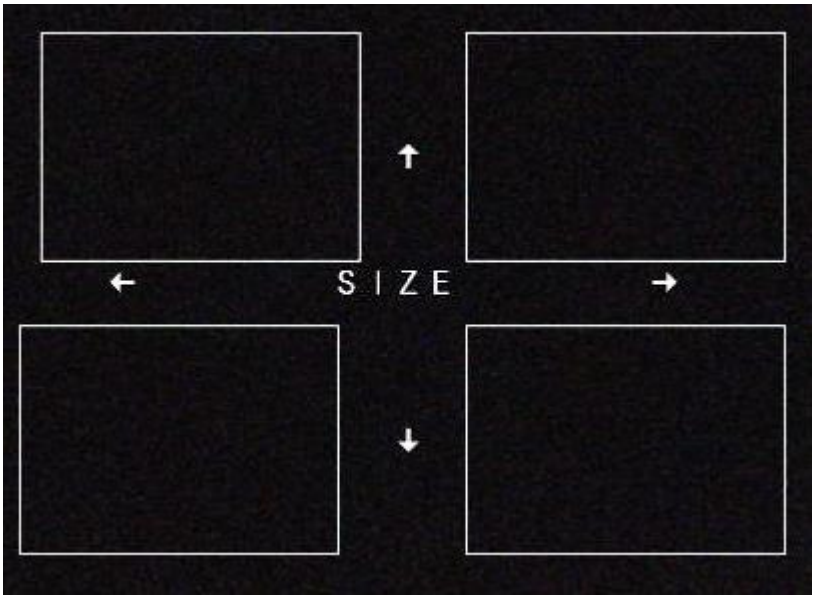
POSITION

Using the UP / Down / Left / Right position the area where needed, then click ENTER



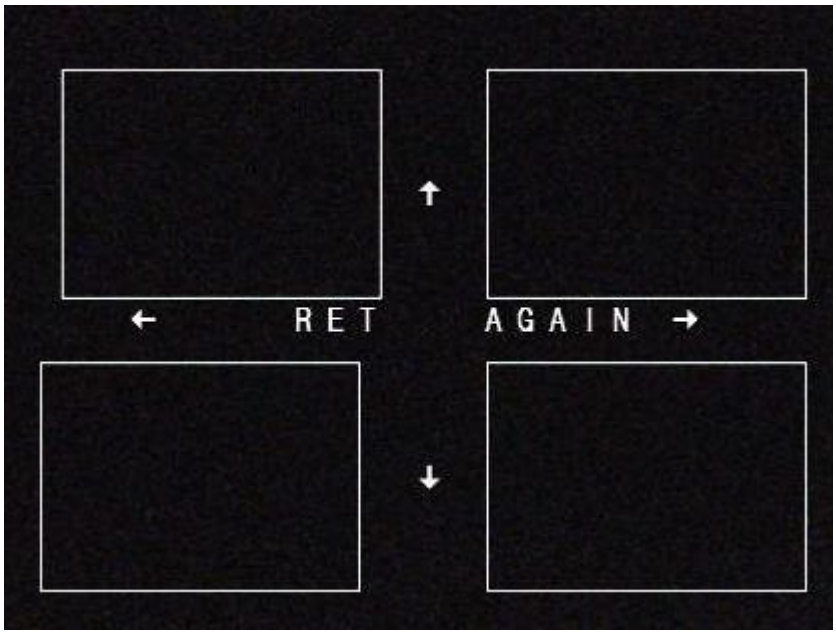
Size

Using the UP / Down / Left / Right position the size needed then click ENTER



RET

Return to Exposure Menu or select arrow right to AGAIN to redo area.



LEVEL

Adjust the intensity level of the highlight masking

Mode

Day or Night for highlight masking

BLACK MASK

Turns masking ON and OFF

DEFAULT

Defaults HSBLC selection

RETURN

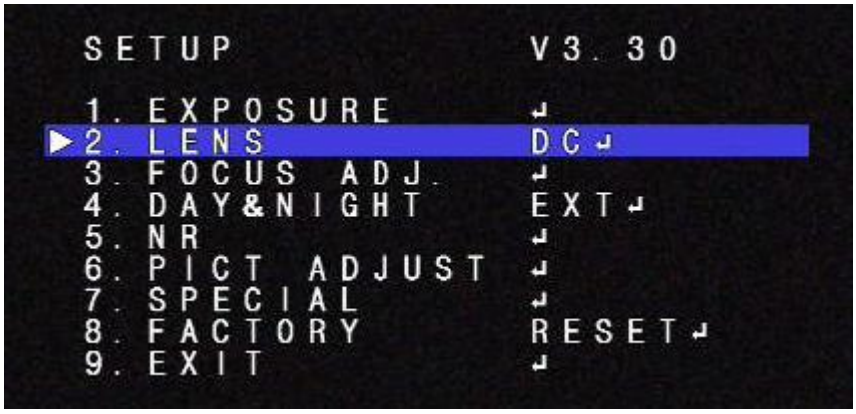
Return to EXPOSURE screen

RETURN

Return to SETUP screen

LENS >>*DC*

This camera is equipped with an Auto Iris Lens "DC" for the automatic adjustment of lighting conditions.



MODE

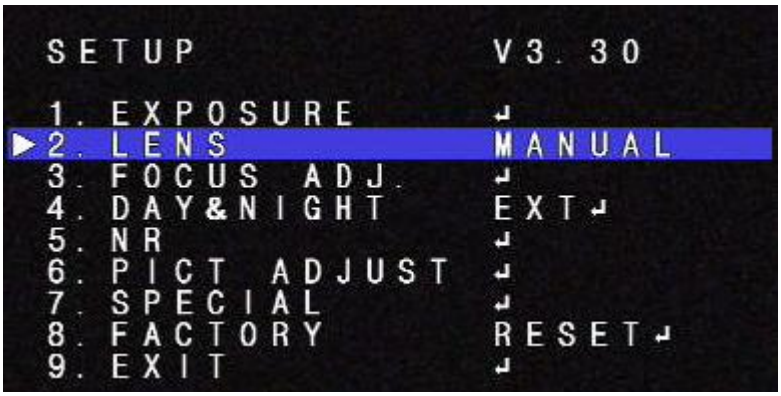
Adjust mode to the proper application (indoor / outdoor)

RETURN

Return to SETUP screen

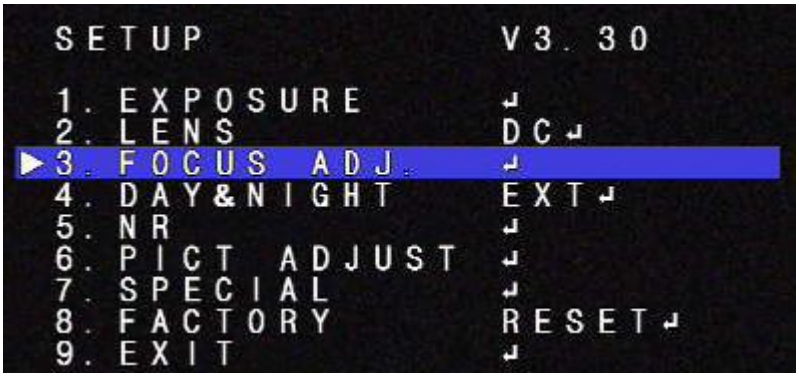
LENS >>*MANUAL*

FUNCTION NOT AVAILABLE



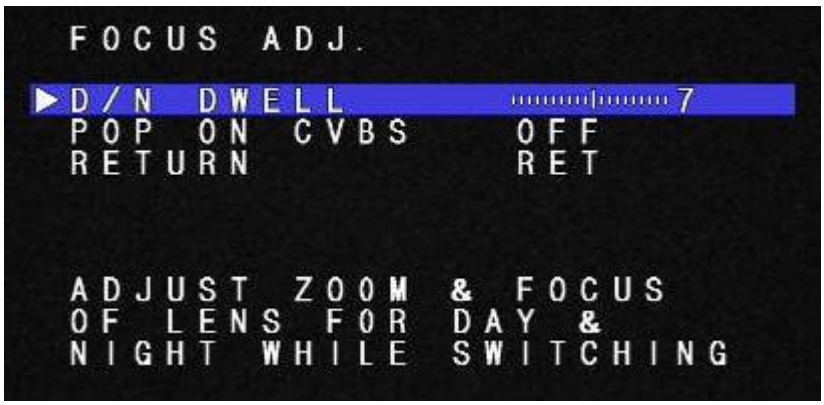
FOCUS ADJ.

Adjusts the focus between day and night



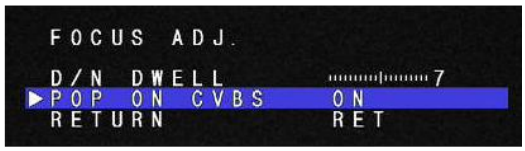
D/N DWELL

Adjust the time between day and night when POP on CVBS is turned on



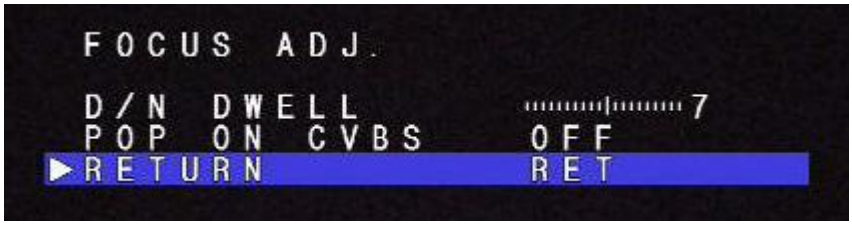
POP ON CVBS

Start sequencing between day and night images for focusing



RETURN

Return to SETUP screen



DAY & NIGHT

DAY&NIGHT menu can be set to AUTO, COLOR, B/W or EXT.

In AUTO, camera determines DAY or NIGHT by the incoming light level through the lens only and IR CUT FILTER switches following the DAY/NIGHT modes.

In COLOR, camera disables DAY/NIGHT feature and works as a regular color camera and IR CUT FILTER is inserted to cut out the infrared spectrum from the light.

In B/W, camera disables DAY/NIGHT feature and works as a regular B/W camera and IR CUT FILTER is removed to pass the infrared spectrum from the light.

In EXT, camera follows the decision for DAY or NIGHT by the light sensor built into the camera.

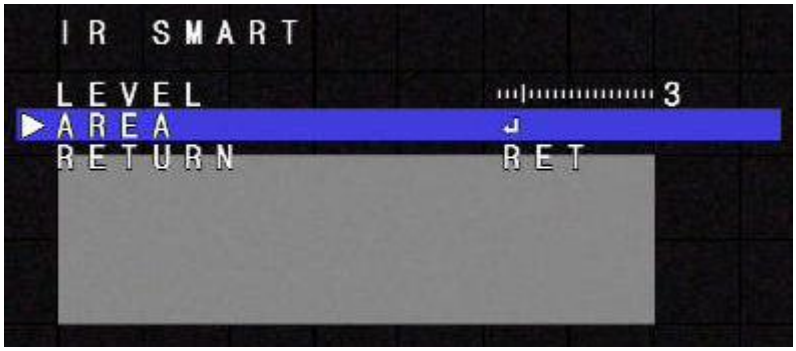
Note: A camera with IR Led's must be set to EXT.

IR SMART

Compensates the amount of IR light on an image, reflecting back to the lens.

AREA

To adjust the Area where the IR intensity is too high.



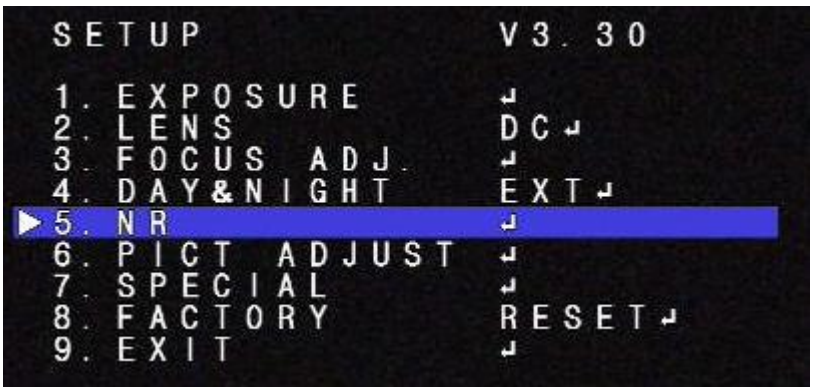
NR (Noise Reduction)

2D & 3D NR are very sophisticated and powerful noise reduction technologies at low light.

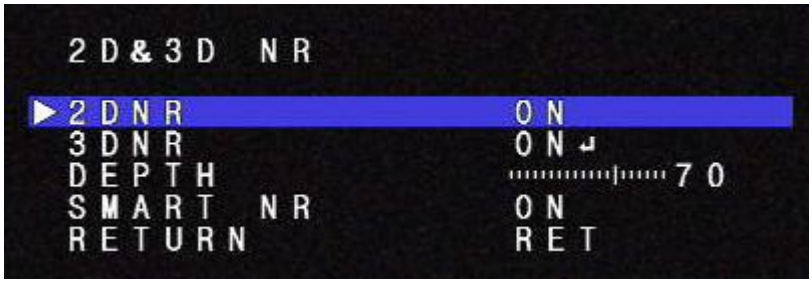
2DNR The process of removing image noise from a video signal by applying a digital comb filter

3DNR A 3D filter reduces the noise caused by movement resulting in less blur.

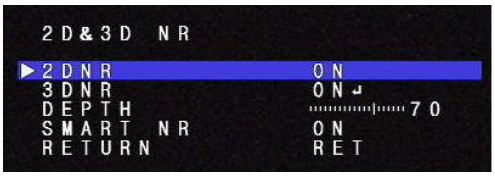
Too strong 3DNR reduction results in the tail effect of a comet or motion blur form a fast moving target in low light.

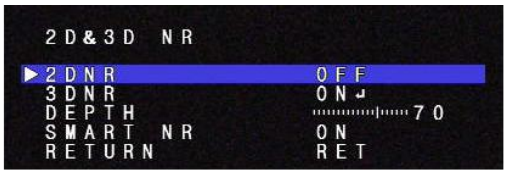


The process of removing image noise from a video signal by applying a digital comb filter

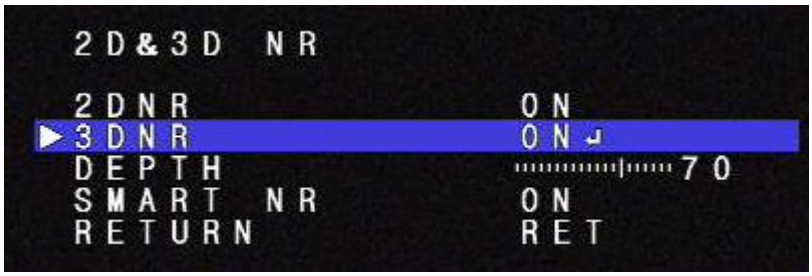


2D NR. ON reduces the noise that can be found in low light images





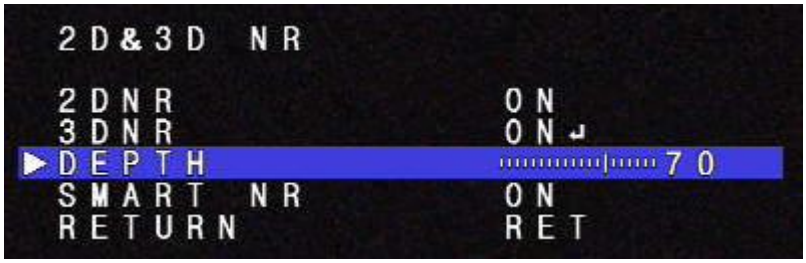
3DNR ON Reduces the noise caused by movement. Start / End of noise reduction with respect to light level can be set to required levels



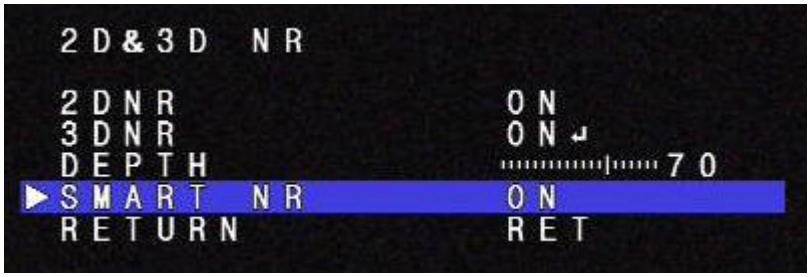
START THRES sets the point from which 3DNR levels starts when the illumination level dims. Higher setting starts 3DNR at higher light level.

END THRES sets the point from which 3DNR stops when the illumination level is higher.

DEPTH sets the strength of noise reduction for 2D&3D. A higher setting stands for stronger reduction, too high of a setting will result in loss of sharpness in 2DNR and ghosting effect in 3DNR.



SMART NR continuously monitors motion on the screen. When no motion is detected, 3DNR is automatically activated for the maximum reduction of noise at low light. 3DNR becomes immediately deactivated upon motion. This will save HDD space



PICT ADJUST (Picture Adjustment)

In PICT ADJUST menu, WHITE BAL, SHARPNESS, MONITOR, OSD COLOR, CORNER COMP and D-EFFECT can be set.

ATW - Automatic Tracking White balance

AWC – White Balance is set at a fix level and stops even though the color temperature changes.

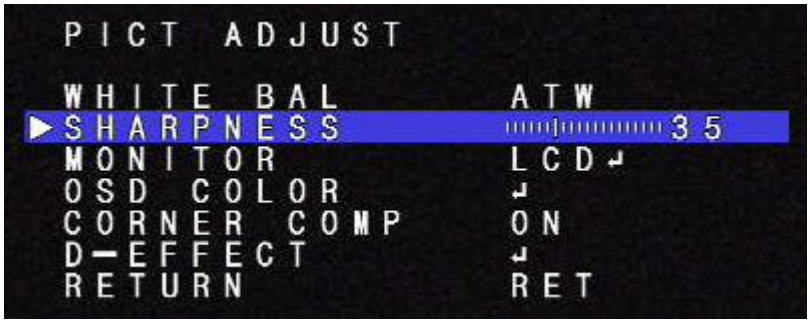
INDOOR – White Balance is fixed at around 3100K.

OUTDOOR - White Balance is fixed at around 5100K.

MANUAL - Adjust White Balance with fixed values of BLUE and RED.

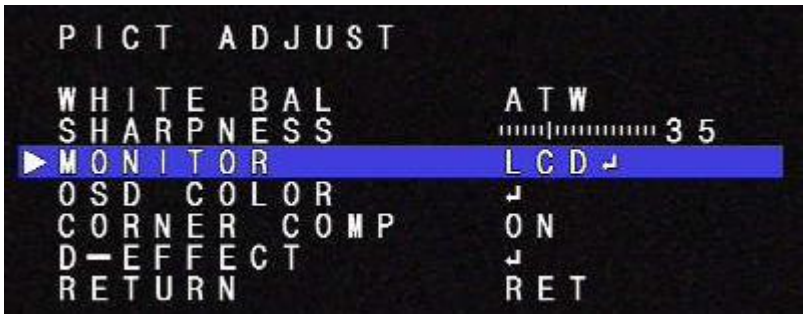
SHARPNESS

Increases or decreases the sharpness of the picture. Too much sharpness makes the image harsh and shows more noise and line flicker at the edge of objects in the picture.



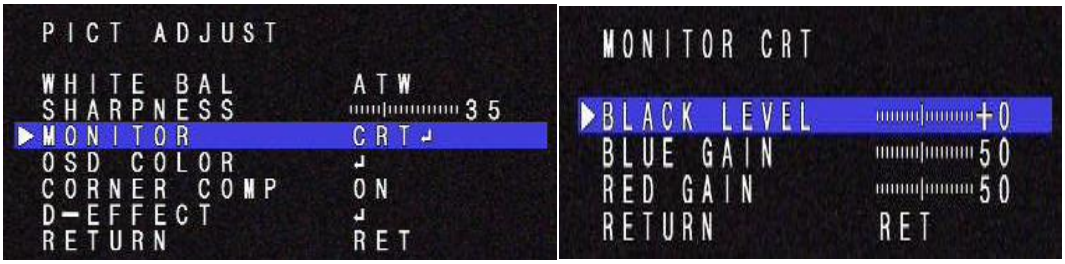
MONITOR

Sets LCD or CRT.



LCD: GAMMA, BLUE, GAIN or RED GAIN is adjustable for the best view with LCD monitor. Low GAMMA compensates for dark areas, slightly but contrast becomes low. High GAMMA increases contrast but looses the visibility of dark areas.

CRT: BLACK LEVEL, BLUE GAIN or RED GAIN are adjustable.

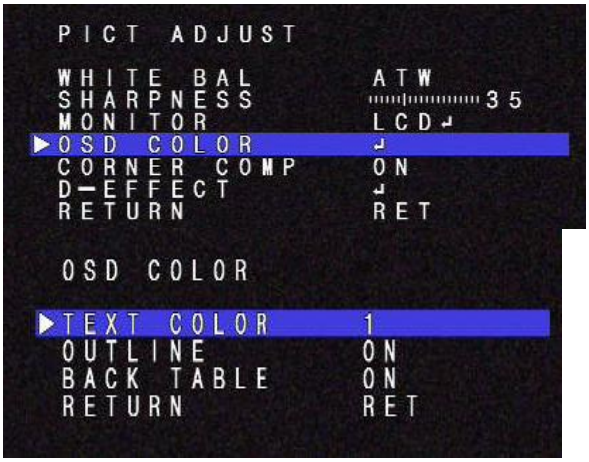


OSD

TEXT COLOR - Can be change to 1 of 8 colors. Selected color is applied to menu text and camera title.

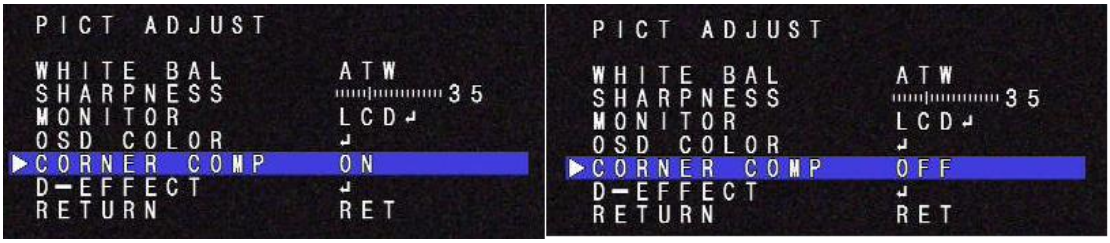
OUTLINE – Makes the letters bold

BACK TABLE - Is the color bar where the cursor is located

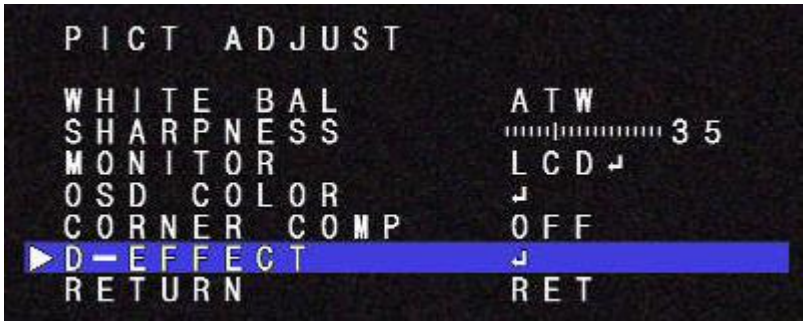


CORNER COMP

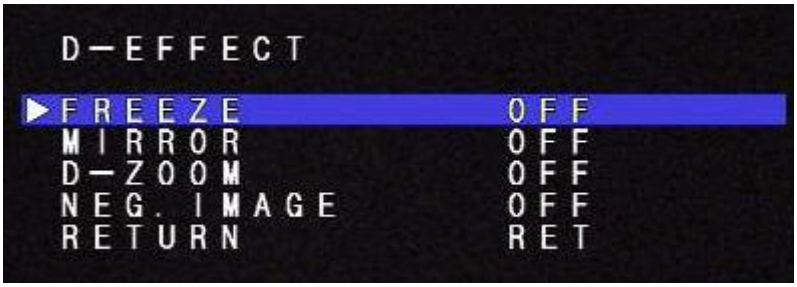
Enhances brightness of the corners caused by the lens, or the narrow angle of IR LEDs. Picture could be noisy when ON.



D-EFECT



FREEZE: Freezes Image



MIRROR:OFF(normal display), MIRROR(Left & right mirrored), V-FLIP(upside down) and ROTATE(H/V-FLIP)

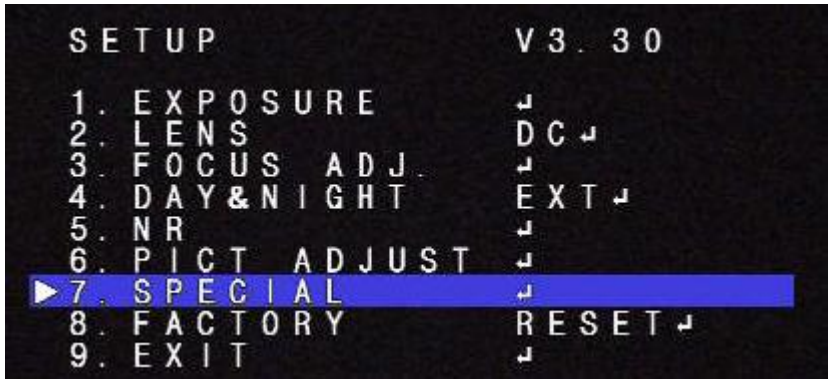
D-Zoom

(Function not available)

NEG.IMAGE: If set to ON,.

SPECIAL

In SPECIAL menu, CAM TITLE, MOTION, PRIVACY, LANGUAGE, PIXEL COM and TV SYSTEM can be set.

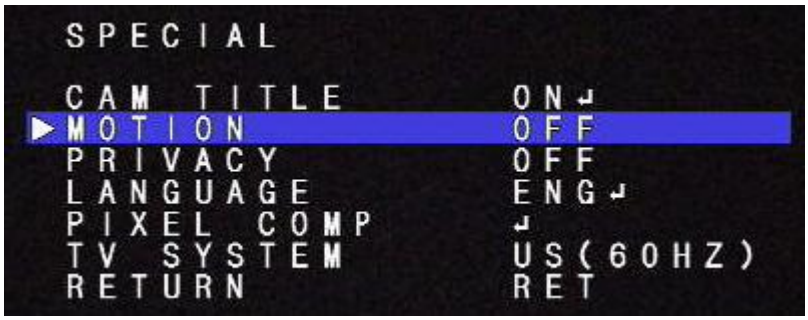


CAM TITLE: OFF / ON. When on click ENTER

Up to 15 characters can be use on camera title line, use ▲,▼,◀,▶ to navigate around chart, when letter or character is flashing click ENTER, continue this in till completed. When done arrow over to POS (POSITION), click ENTER and position camera title to desire location, click enter to return to previous screen and arrow over to END and click ENTER.

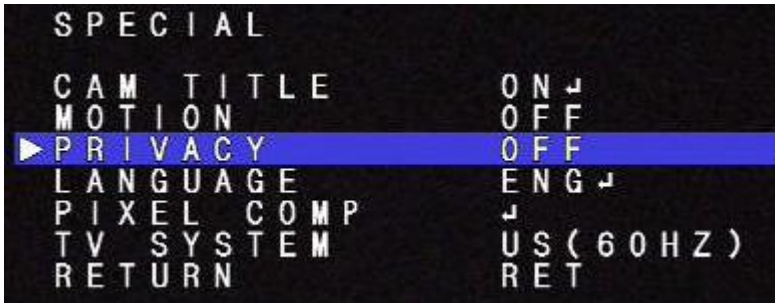
MOTION

Note USE Motion Detection Settings under Device Configuration



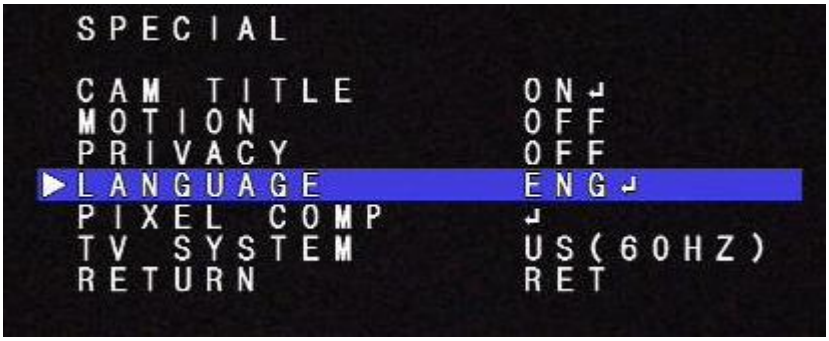
PRIVACY

Note USE Privacy settings under Device Configuration



LANGUAGE

English, Japanese, Chinese 1, Chinese 2, German, French, Italian, Spanish and Polish.



PIXEL COMPENSATION

Sometimes image sensors have defective pixels, this can be compensated in two different ways LIVE DPC, compensates the defective pixels in real time and STATIC DPC, detects the defective pixels with lens closed and saves the data for compensation

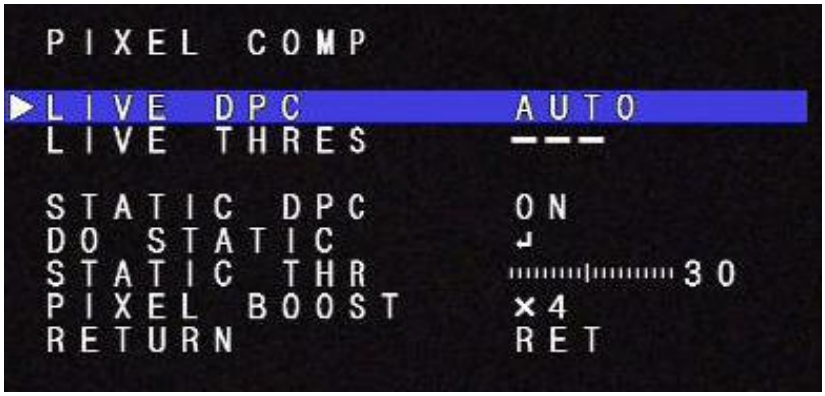
LIVE DPC compensates the defective pixels in real time where pixel amplitude exceeds the threshold.

AUTO - Enables LIVE DPC and dynamically compensates the defective pixels whose amplitude exceeds the threshold calculated according to AGC. At low light, more defective pixels are compensated because the threshold becomes lower due to high AGC.

ON - Enables LIVE DPC and compensates the defective pixels whose magnitude exceeds the threshold by set level.

OFF - Disables LIVE DPC.

Note: High setting of LEVEL in LIVE DPC reduces the sharpness

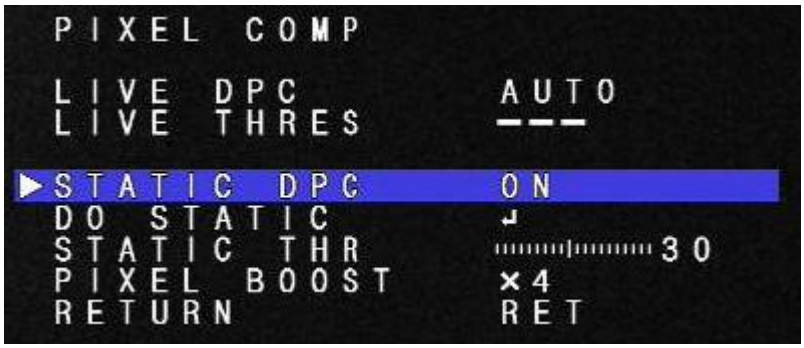


STATIC DPC

Detects the defective pixels with lens closed and saves the data for compensation

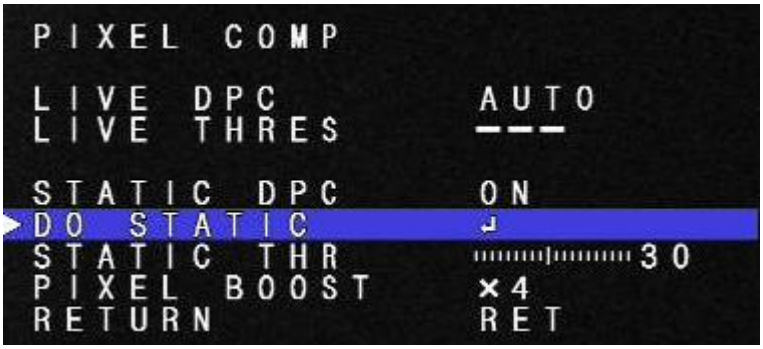
ON - Enables the compensation for the detected defective pixels.

OFF - Will not apply the compensation.



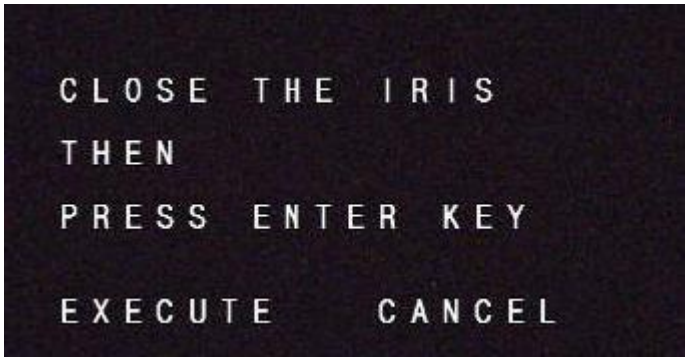
DO STATIC

Camera closes the lens automatically and detects the defective pixels.



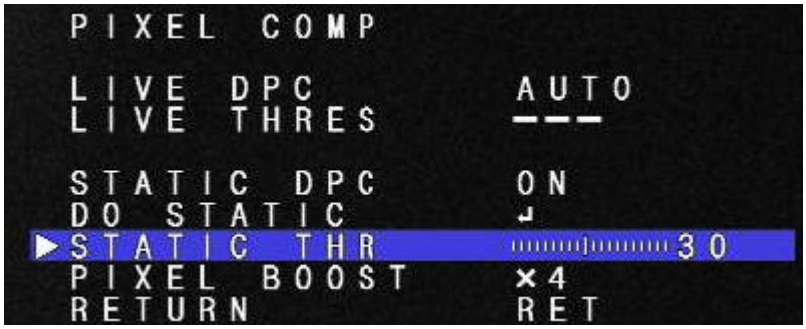
Note: Lens cap is highly recommended because the iris of some lens do not close perfectly.

After covering the lens click ENTER then click ENTER on Execute screen



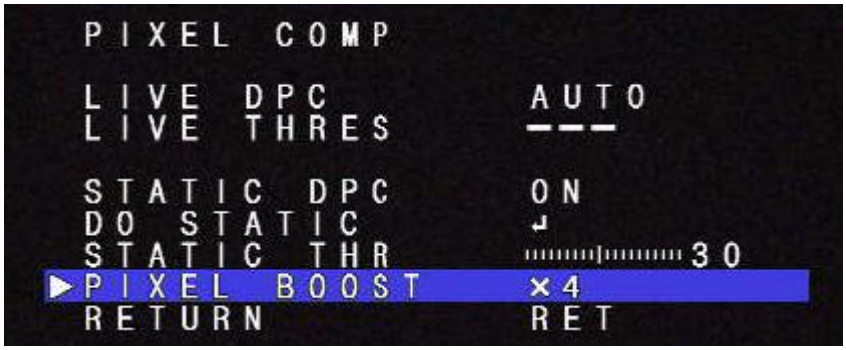
STATIC THR

For white dots (noise) caused by a defective pixel exceeding the levels will be compensated. The lower the setting the more pixels will be compensated up to 1024 staring from top to bottom.



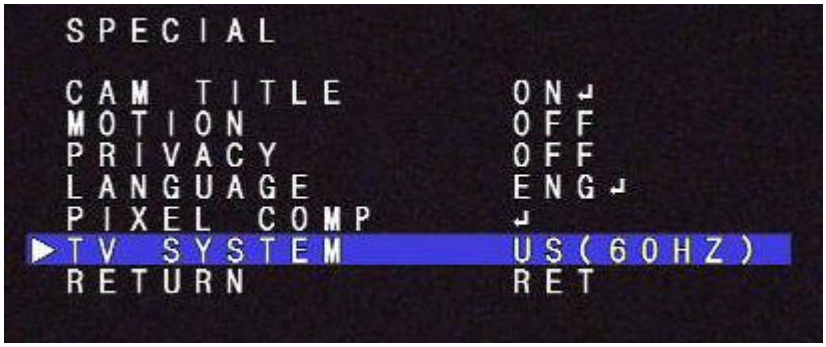
PIXEL BOOST

It is easier to detect defective pixels with PIXEL BOOST, but the higher the level the more noise might be detected by mistake and give a false reading.



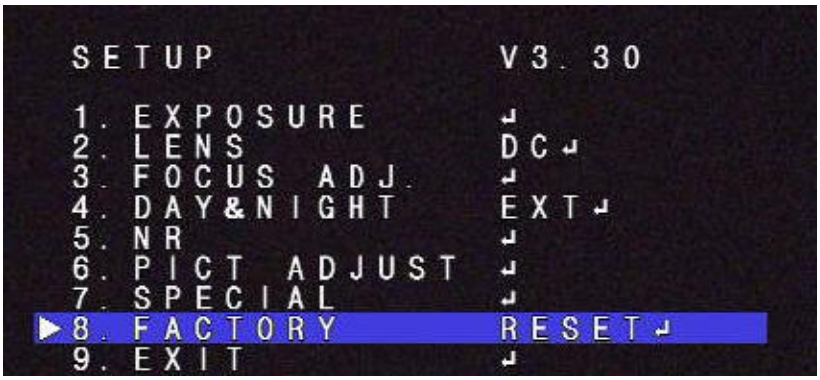
TV SYSTEM

Select between US (NTSC 60Hz) or EU (PAL 50Hz)



Factory

Defaults the camera settings (Not the network settings)



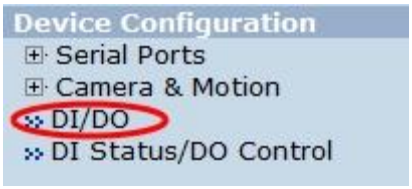
EXIT

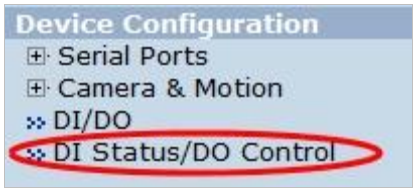
Exits the Set up menu

14.5. DI (Sensor Input) / DO (Alarm Output)

Select **DI/DO** from **Device Configuration** menu to name and configure Sensor Input and Alarm Output. After configuring, select **DI Status/DO Control** on Device Configuration menu to manually control **DO** (Alarm Output) and check status of **DI** (Sensor Input).

DI/DO Setup DI/DO Control





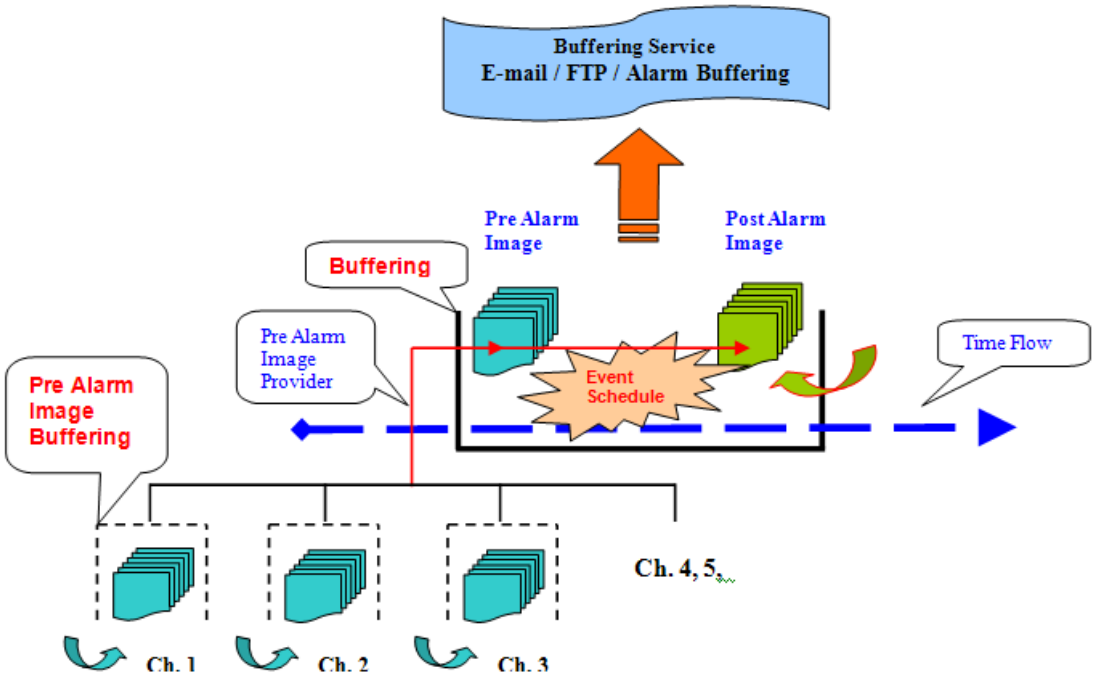
DI/DO functionality can be set to either Normal Open or Normal Closed type as follows.

- **Normal Open Type**: Normal is **OPEN**, and goes **CLOSED** when triggered by an event.
- **Normal Close Type**: Normal is **CLOSED**, and goes **OPEN** when triggered by an event.

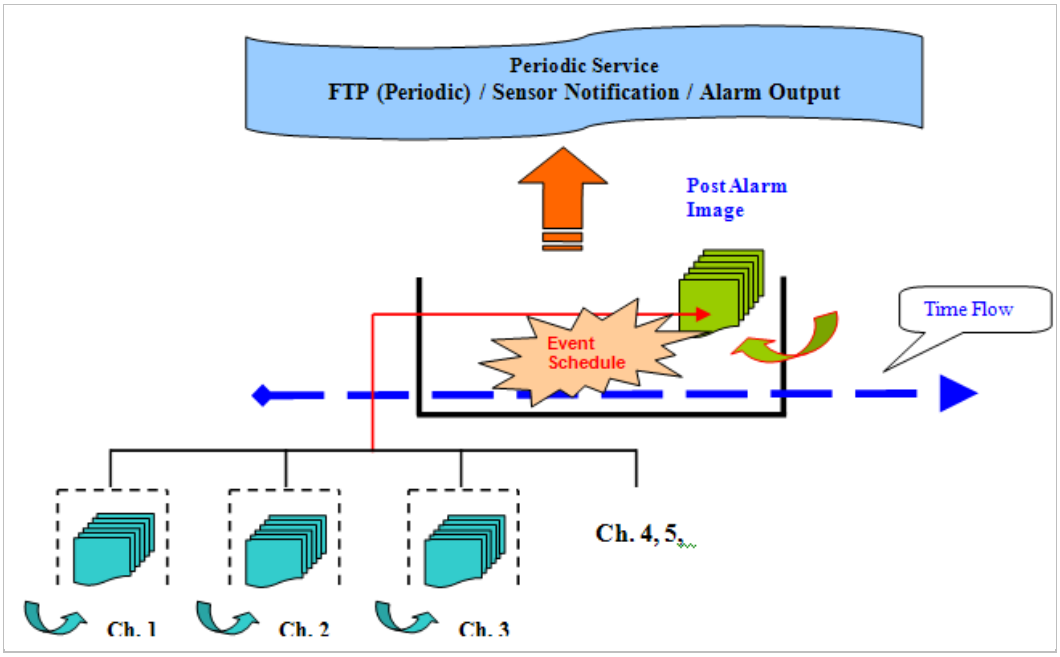
Note: Make sure the type of the sensor and use it correctly to the type. If a Sensor Input is not used, it must be set to Normal Open Type to avoid a false input.

15. Advanced Configuration

There are two types of advanced service, one is **Buffered Service** and the other is **Periodic Service**. In Buffering Service, a series of images are continuously being stored in a buffer memory of the camera/server for a certain period of time. When the camera/server is triggered by an event or schedule, the images or alarm status just before and after the event/schedule are reported to you by email or buffered FTP services.

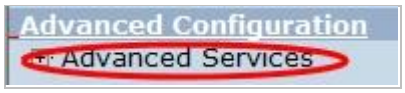


In Periodic Service, only the image, alarm/sensor status after an event/schedule is reported to you upon the server being triggered.

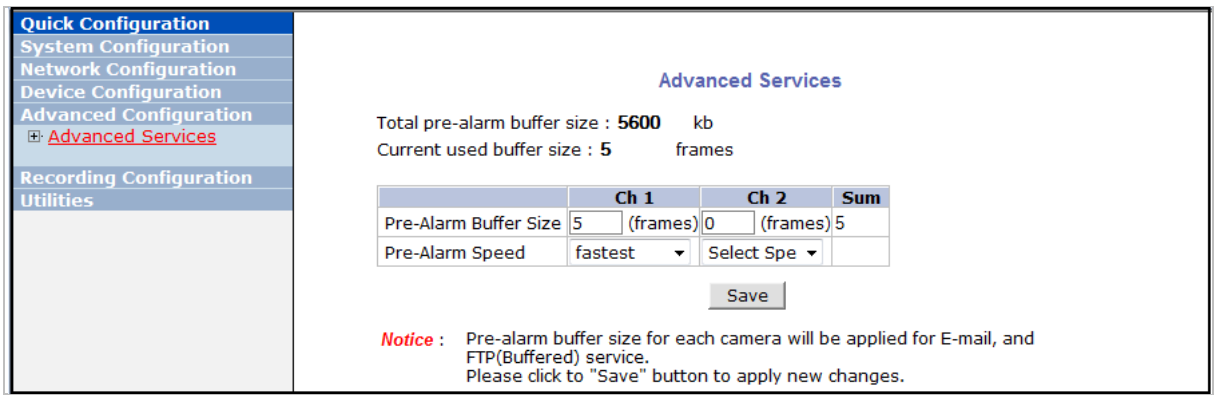


15.1. Advanced Services

Pre-Alarm buffer size and buffering speed can be defined here.

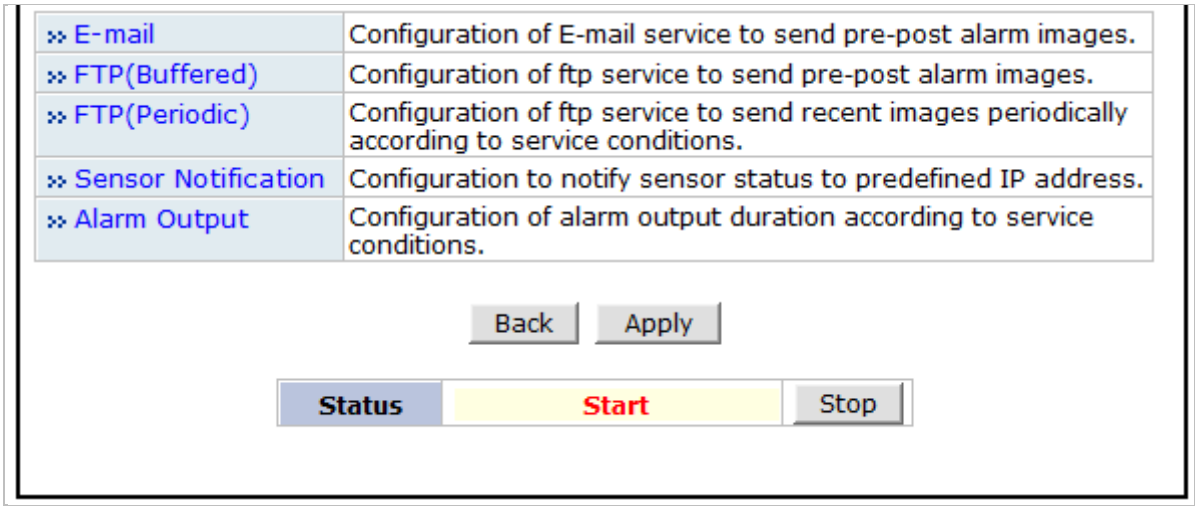


- **Pre-Alarm Buffer Size**: You can set the buffer size which will store the images before event. The unit is in frame, and each channel can be set with different values. The total number of frames for Pre-Alarm Buffer and Post-Alarm Buffer is limited to 10 frames.



- **Pre-Alarm Speed**: You can set the buffering speed. If it's set to Fastest, the server will store images as fast as it can. Each cannel can be set with different values.

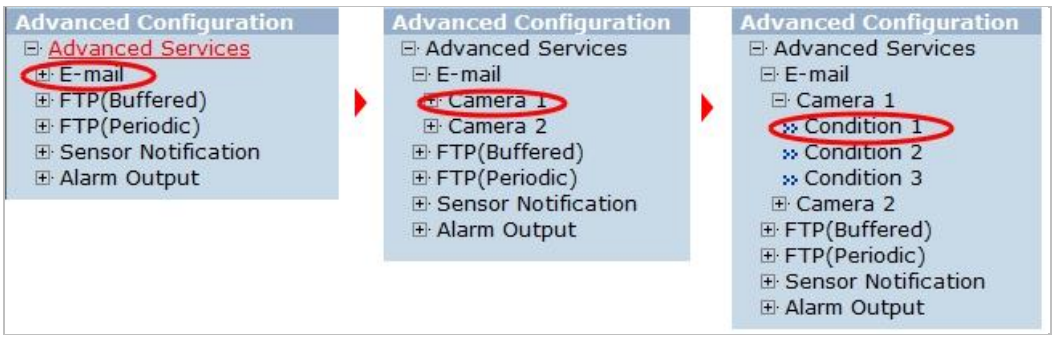
This configuration applies to E-mail and FTP(Buffered), and click **Save** button to apply changes.


E-mail
Configuration of E-mail service to send pre-post alarm images.
FTP(Buffered)
Configuration of ftp service to send pre-post alarm images.
FTP(Periodic)
Configuration of ftp service to send recent images periodically according to service conditions.
Sensor Notification
Configuration to notify sensor status to predefined IP address.
Alarm Output
Configuration of alarm output duration according to service conditions.
Back
Apply
Status
Start
Stop

- **E-mail**: Set up Email Service configuration
- **FTP (Buffered)**: Set up FTP (Buffered) Service configuration
- **FTP (Periodic)**: Set up FTP (Periodic) Service configuration

15.1.1. E-mail Service Configuration

Email configuration is set up here for Alarm in case any event occurs.

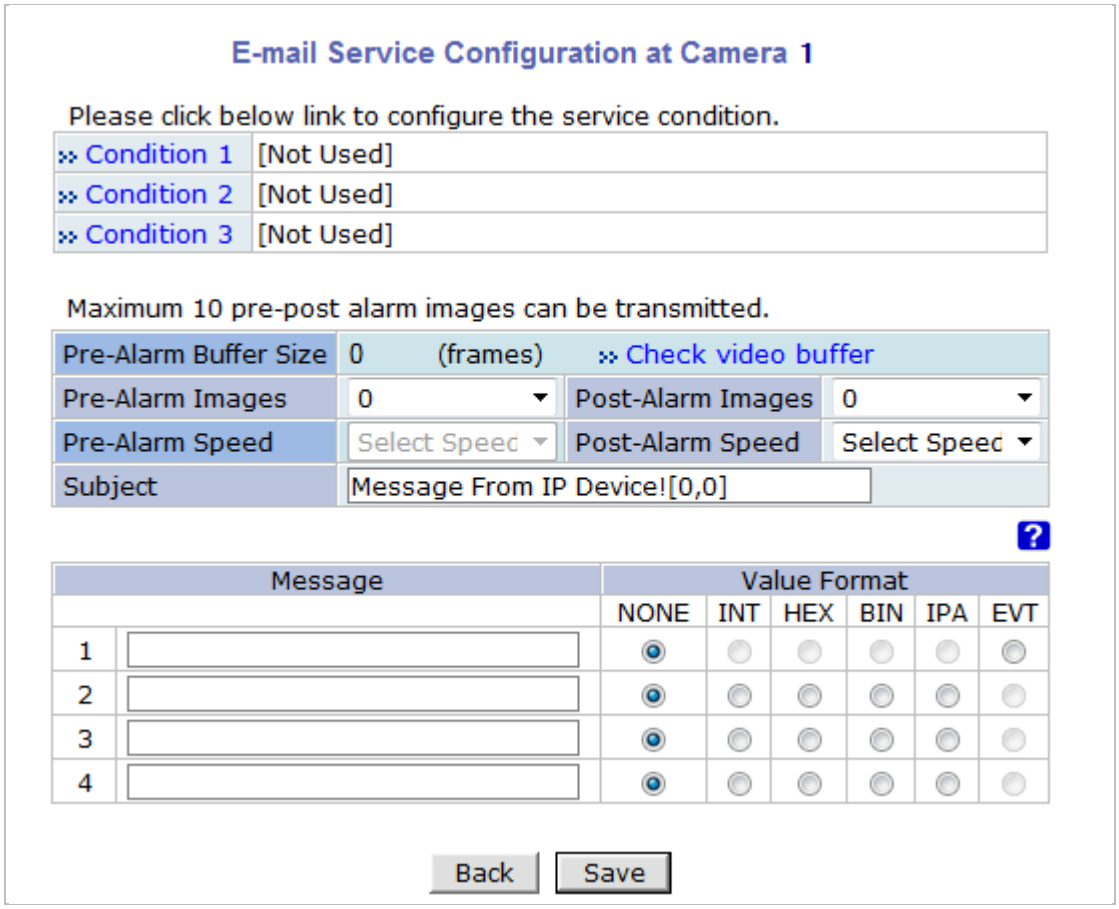


Item	Description
Camera 1~2	Select a channel to be configured for email notification
Service	Select **Enable** in order to use this service
SMTP server address	Enter SMTP server's address for sending email.
Authentication Login	Select **Enable** if SMTP server requires ID and password
User ID	Enter User ID to log in to SMTP server
Password	Enter Password to log in to SMTP server
Sender	Enter email address of the sender
1st Recipient	Enter the email address of the first recipient
2nd Recipient	Enter the email address of the second recipient
3rd Recipient	Enter the email address of the third recipient

Click **Save** button to apply the change. If you don't want to change, click **Back** button.

E-mail Service Setup for Each Channel

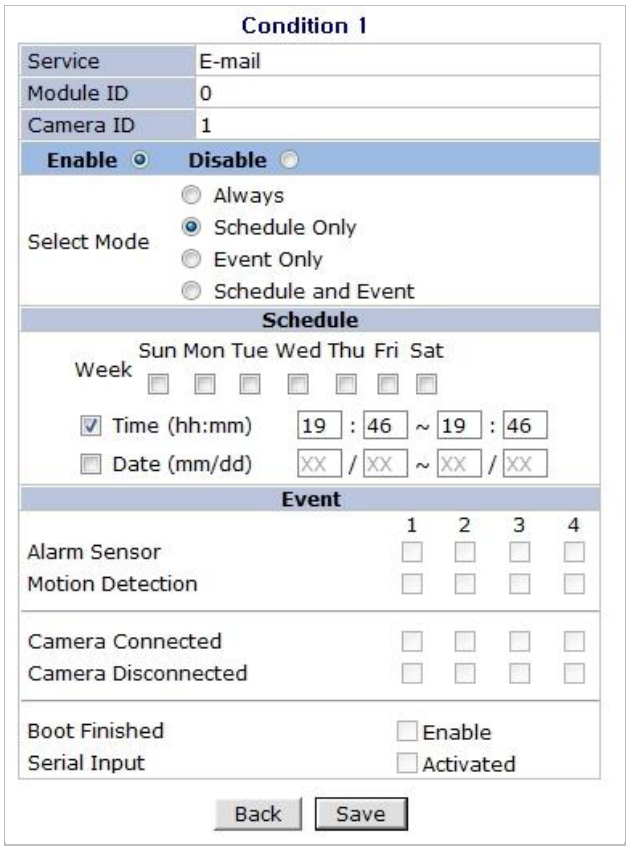
For each channel, the following items can be configured for email service: Condition, Post-Alarm Buffer Size, and Post-Alarm speed. The content of text message and display style of DI value can be configured as well.



Item	Description
Condition 1 ~ Condition 3	Select a condition for Email service to be activated.
Pre-Alarm Buffer Size	The Buffer size assigned for Pre-Alarm.
Check Video buffer	Click this link to go to Advanced Services for buffer setup.
Pre-Alarm Images	The number of image frames to store before Alarm
Post-Alarm Images	The number of image frames to store after Alarm
Pre-Alarm Speed	This field shows the speed of Pre-Alarm. Configuration can be done in Advances Services page.
Post-Alarm Speed	Select the speed of Post-Alarm. **Fastest** is the highest value.
Subject	Subject of the E-mail message to send.
1	Content of the first line in the email message.
2	Content of the second line in the email message.
3	Content of the third line in the email message.
4	Content of the fourth line in the email message
Value Format	Select the format for the Event or DI data to email. NONE: Don't Send, INT: Decimal, HEX: Hexadecimal, BIN: Binary, IPA: IP Address, EVT: Name of Event

After finishing setup, click **Save** button to apply. If you don't want to change, click **Back** button.

Condition, Schedule & Event Configuration

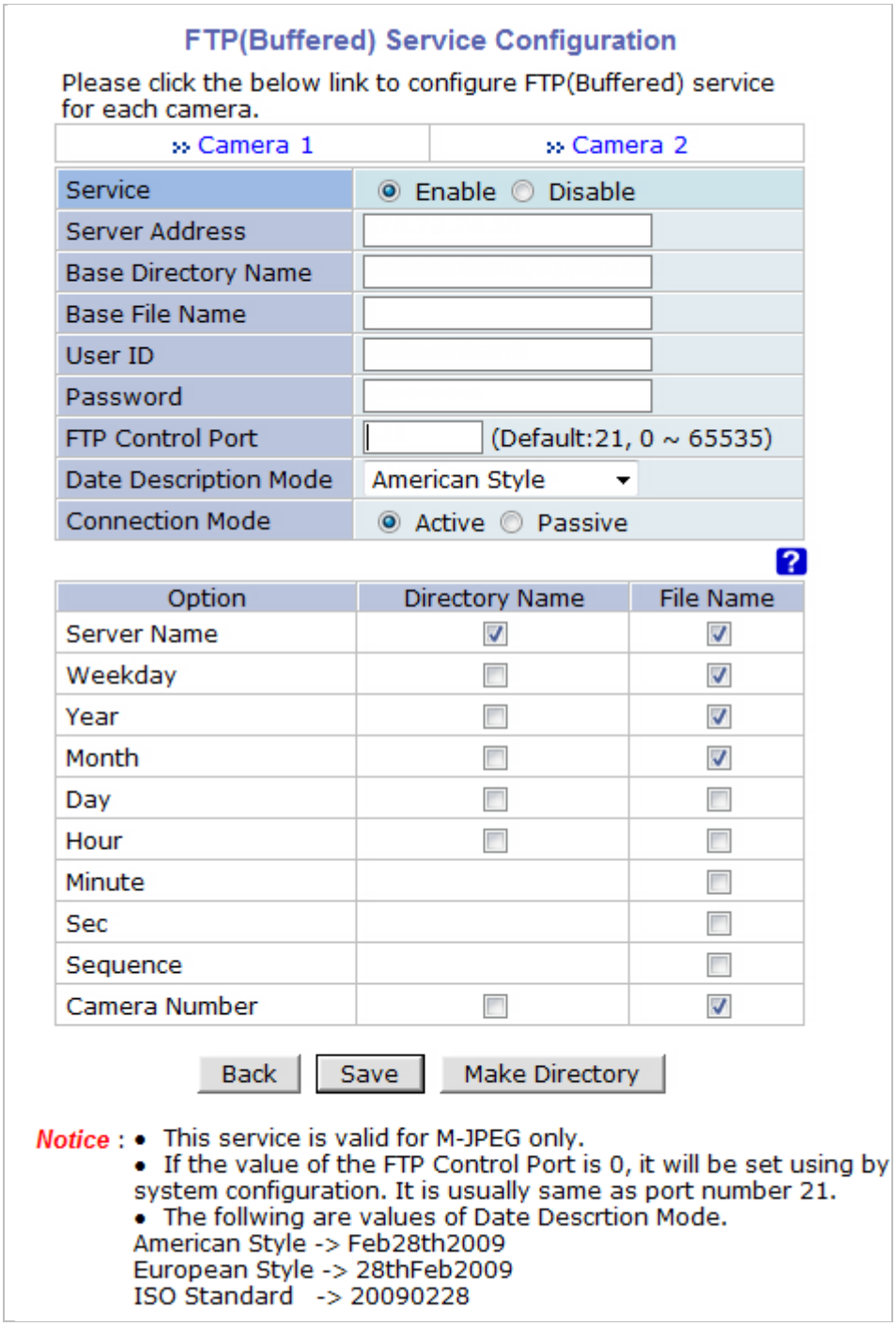


If you click on a **Condition** link, the **Advanced Service** windows is displayed as shown below. Alarm Service is activated only when the conditions in Advanced Services are met.

Item	Description
Service	This shows what service this condition is for.
Module ID	Module ID for current setup
Camera ID	Channel ID for current setup
Enable / Disable	Select **Enable** to use Condition, otherwise select **Disable**.
Always	This Condition applies all the time. (Schedule or Event is not usable)
Schedule Only	Use Week, Time, and Date in Condition parameter. If none of the weekdays are checked, it is activated every day.
Event Only	It is activated only when any of the following events occurs. (Sensor, Motion Detection, Camera Connection, Server Booting)

To save the setting, click **Save** button. If you want to cancel it, click **Back**.

15.1.2. FTP (Buffered) Service Configuration

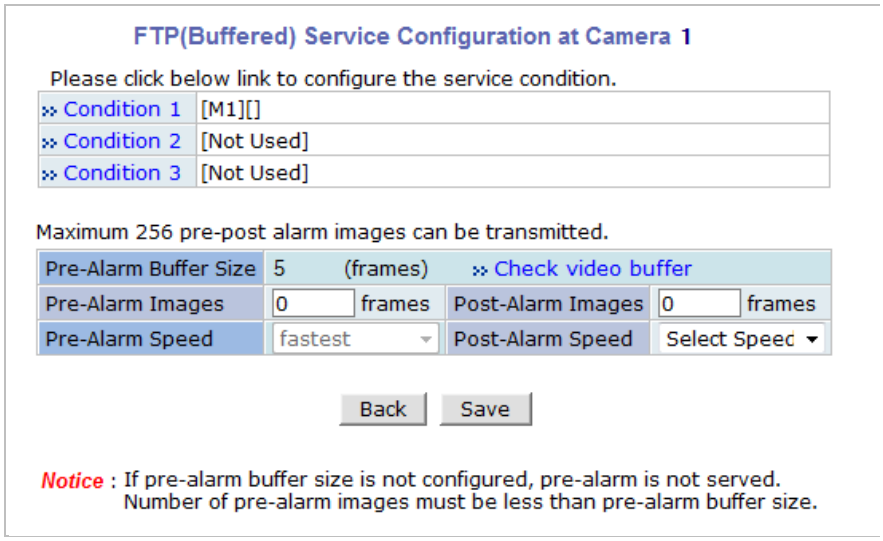


Item	Description
Camera 1 - Camera 2	Select which channel to set up for FTP (Buffered).
Service	Select **Enable** to use the FTP (Buffered) service. Otherwise select **Disable**.
Server Address	FTP Server Address.
Base Directory Name	The directory in FTP server where the data will be uploaded. (You should make the directory in the FTP server before using the service.)
Base File Name	The base file name of the data to be uploaded in FTP server.

User ID	Enter a User ID to log in to FTP server.
Password	Enter the Password for the user ID to log in to FTP server
FTP Control Port	Port number for FTP server (Normally 21 is used)
Date Description Mode	Select Date Display Style: American, European or ISO Standard
Connection Mode	Select connection mode for FTP server
Server Name	If **Directory Name** is checked, new directory is created with server name. If **File Name** is checked, new file is created with server name.
Weekday	If **Directory Name** is checked, new directory name is created with weekday. If **File Name** is checked, new file name is created with weekday.
Year	If **Directory Name** is checked, new directory name is created with Year. If **File Name** is checked, new file name is created with Year.
Month	If **Directory Name** is checked, new directory name is created with month. If **File Name** is checked, new file name is created with month.
Day	If **Directory Name** is checked, new directory name is created with day. If **File Name** is checked, new file name is created with day.
Hour	If **Directory Name** is checked, new directory name is created with hour. If **File Name** is checked, new file name is created with hour.
Minute	If checked, new file name is created with minute.
Sec	If checked, new file name is created with second.
Sequence	If checked, new files are created starting from 0, with increment of 1.
Camera Number	If **Directory Name** is checked, new directory is created with camera number. If **File Name** is checked, new file is created with camera number.

To create a directory with the options shown above, click **Make Directory** button. After finishing the configuration, click **Save** button to apply the change and continue to the next page. Clicking **Back** button will cancel the changes and go back to the previous page. (This service is available only in M-JPEG mode.)

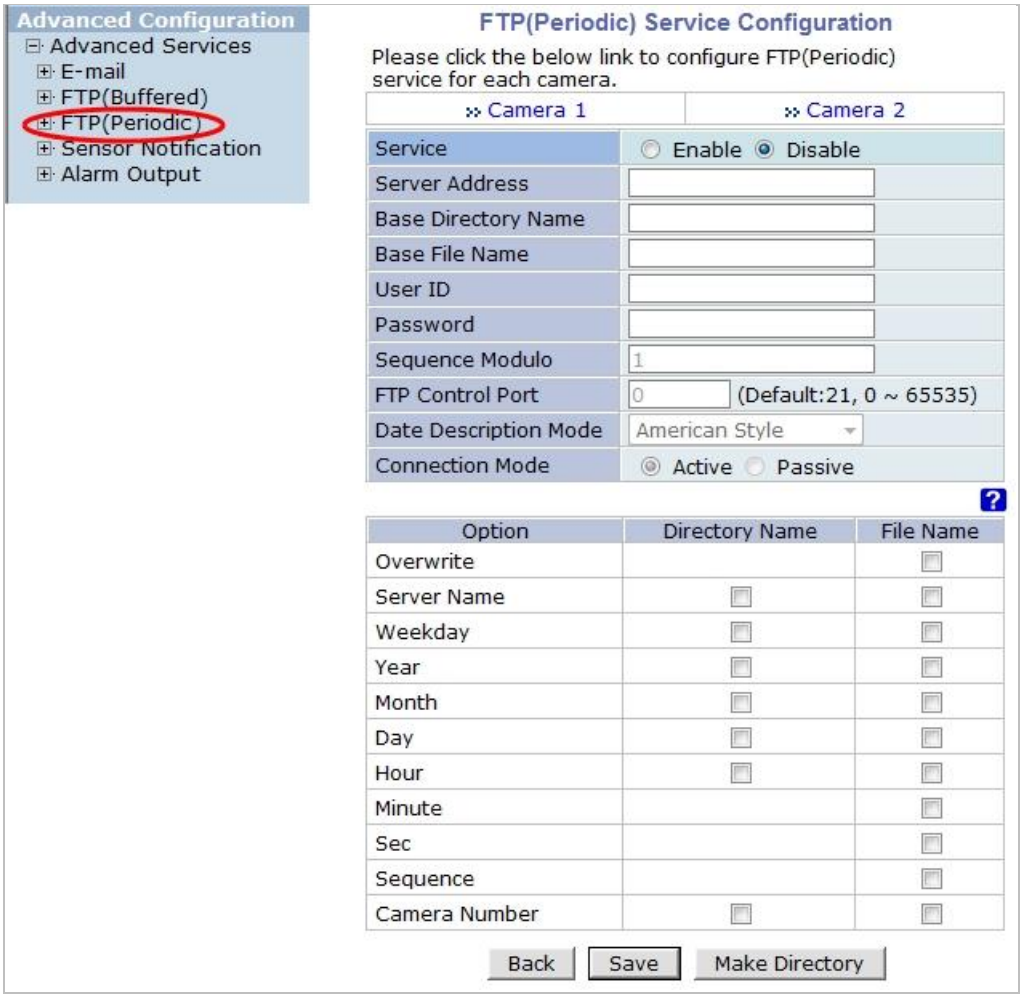
FTP (Buffered) Service Configuration at Camera 1



Item	Description
Condition 1 ~ Condition 3	Select a condition for FTP (Buffered) service to be activated. Up to 3 conditions can be set.
Pre-Alarm Buffer Size	The Buffer size assigned for Pre-Alarm.
Check Video buffer	Click this link to go to Advanced Services for video buffer setup.
Pre-Alarm Images	The number of image frames to store before Alarm.
Post-Alarm Images	The number of image frames to store after Alarm.
Pre-Alarm Speed	This field shows the speed of Pre-Alarm. Configuration can be done in Advances Services page.
Post-Alarm Speed	Select the speed of Post-Alarm. **Fastest** is the highest value.

After finishing setup, click **Save** button to apply. If you don't want to change, click **Back** button.

15.1.3. FTP (Periodic) Service Configuration



Notice :
- This service is valid for M-JPEG only.
- If the value of the FTP Control Port is 0, it will be set using by system configuration. It is usually same as port number 21.
- The follwing are values of Date Descrtion Mode.

American Style -> Feb28th2009
European Style -> 28thFeb2009
ISO Standard -> 20090228

Item	Description
Camera 1 - Camera 2	Select which channel to set up for FTP (Periodic) service
Service	Select **Enable** to use the FTP (Periodic) service. Otherwise select **Disable**.
Server Address	FTP Server Address.
Base Directory Name	The directory in FTP server where the data will be uploaded. (You should make the directory in the FTP server before using the service.)
Base File Name	The base file name of the data to be uploaded in FTP server.
User ID	Enter a User ID to log in to FTP server.
Password	Enter the Password for the user ID to log in to FTP server
Sequence Modulo	Maximum number used in sequential file name
FTP Control Port	Port number for FTP server (Normally 21 is used)
Date Description Mode	Select Date Display Style: American, European or ISO Standard
Connection Mode	Select connection mode for FTP server
Overwrite	If checked, new file overwrites the existing file with the same name.
Server Name	If **Directory Name** is checked, new directory is created with server name. If **File Name** is checked, new file is created with server name.
Weekday	If **Directory Name** is checked, new directory name is created with weekday. If **File Name** is checked, new file name is created with weekday.
Year	If **Directory Name** is checked, new directory name is created with year. If **File Name** is checked, new file name is created with year.
Month	If **Directory Name** is checked, new directory name is created with month. If **File Name** is checked, new file name is created with month.
Day	If **Directory Name** is checked, new directory name is created with day. If **File Name** is checked, new file name is created with day.
Hour	If **Directory Name** is checked, new directory name is created with hour. If **File Name** is checked, new file name is created with hour.
Minute	If checked, new file name is created with minute.
Sec	If checked, new file name is created with second.
Sequence	If checked, new files are created starting from 0, with increment of 1.
Camera Number	If **Directory Name** is checked, new directory is created with camera number. If **File Name** is checked, new file is created with camera number.

To create a directory with the options shown above, click **Make Directory** button. After finishing the configuration, click **Save** button to apply the change and continue to the next page. Clicking **Back** button will cancel the changes and go back to the previous page. (This service is available only in M-JPEG mode.)

FTP (Periodic) Service Configuration for each channel

Notice : FTP interval is the time interval between each image upload service.
If you put the number, the last numeric digit will be truncated to zero.
For example, if you type 154 or 17, it becomes 150msec and 10msec.
If the number is lower than 10, FTP interval becomes zero and
FTP service is executed without any time interval.

Item	Description
Condition 1 ~ Condition 3	Select a condition for FTP (Periodic) service to be activated. Up to 3 conditions can be set respectively.
FTP interval (msec)	Select the speed of images to send in FTP(Periodic) service

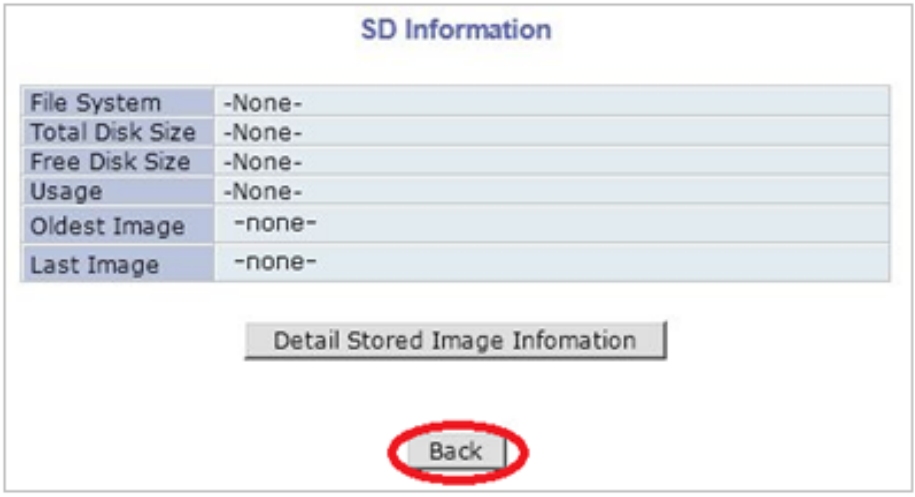
After finishing setup, click **Save** button to apply. If you don't want to change, click **Back** button.

16. Recording Configuration for Cameras with SD card

Some versions of VITEK IP cameras will have a microSD or a full SD Card.
Those models can record and playback video from the SD card if installed. Vitek IP cameras can Support cards up to a 32GB. (Only use quality class 10 SD cards)

16.1. SD / MicroSD Card Configuration

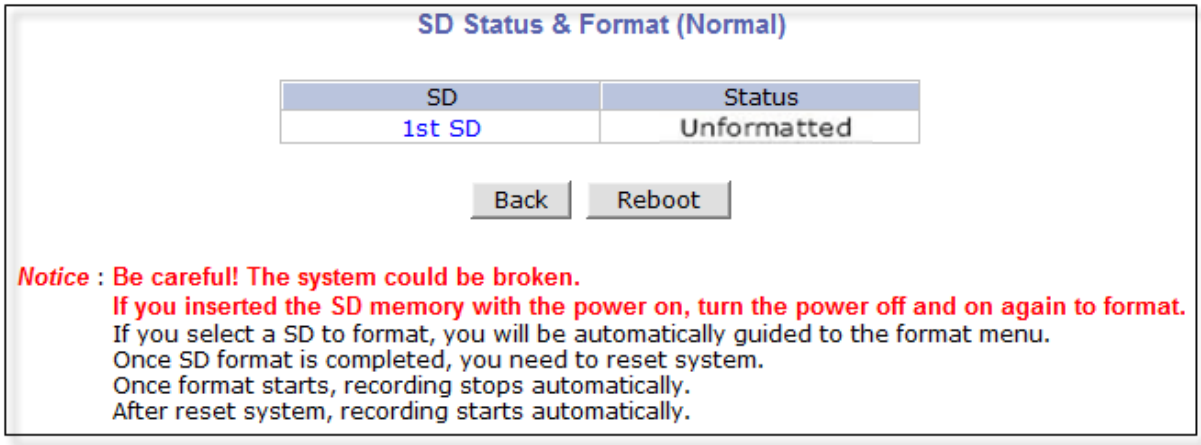
If a SD card is not present in the slot already, power down the VITEK IP camera before inserting an SD card. Make sure to turn the power on after inserting the SD card. Open a web browser, type in the IP address of the VITEK camera. Log in as Admin, Enter **Recording Configuration** menu, and then click on **SD Configuration** then click on **SD Information,** the card's format information will be displayed



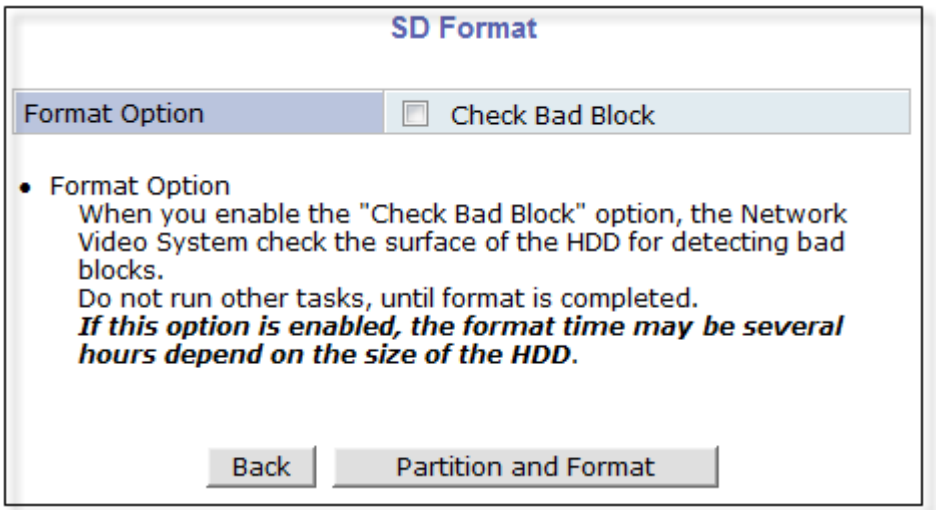
If entire SD information is showing "-NONE-" this means SD card is not formatted, in this case click

Note: Be sure to turn off the device before installing a SD card. Otherwise, the SD card may become defective. Always check the recommended type of SD card because non-conforming SD cards can cause abnormal behavior of the system.

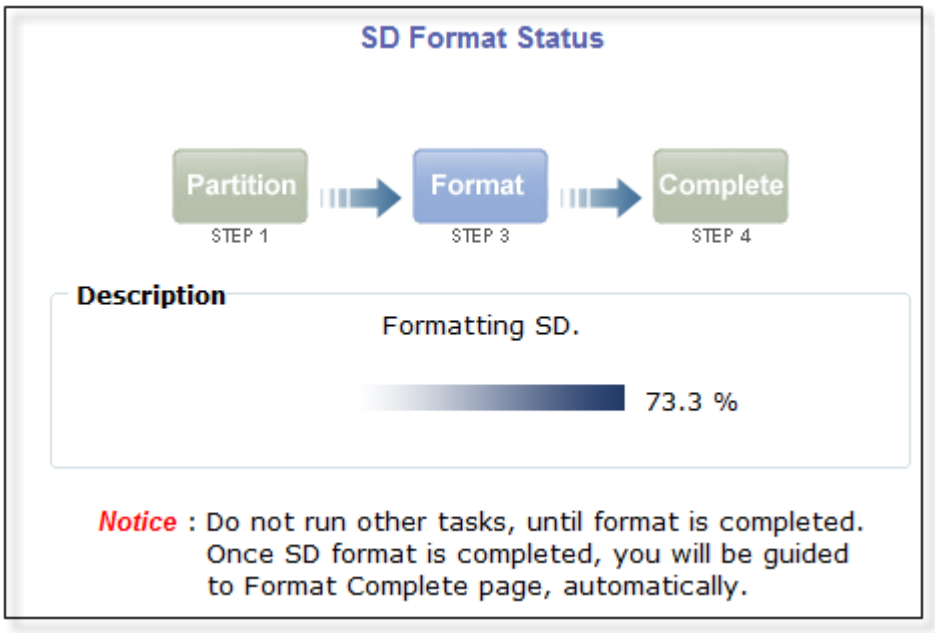
back button followed by clicking SD Status & Format


SD Status & Format (Normal)
SD
Status
1st SD
Unformatted
Back
Reboot
Notice : Be careful! The system could be broken.
If you inserted the SD memory with the power on, turn the power off and on again to format.
If you select a SD to format, you will be automatically guided to the format menu.
Once SD format is completed, you need to reset system.
Once format starts, recording stops automatically.
After reset system, recording starts automatically.

Click on **"1st SD"** and the following screen will be displayed

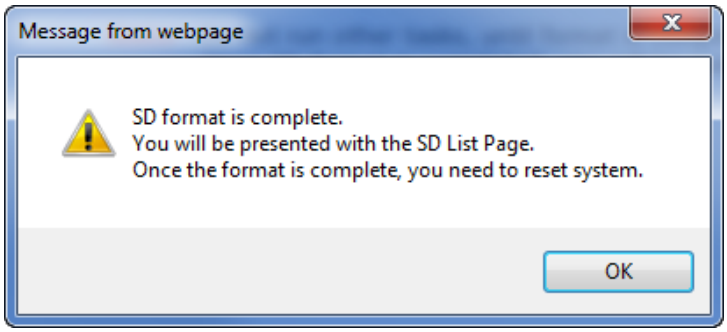

SD Format
Format Option
Check Bad Block
Format Option
When you enable the "Check Bad Block" option, the Network Video System check the surface of the HDD for detecting bad blocks.
Do not run other tasks, until format is completed.
If this option is enabled, the format time may be several hours depend on the size of the HDD.
Back
Partition and Format

Read format option on screen and then click **Partition and Format** a pop up screen will display asking if you want to do a "Partition and formatting" click OK to continue or Cancel to stop. After clicking OK the following screen will be displayed

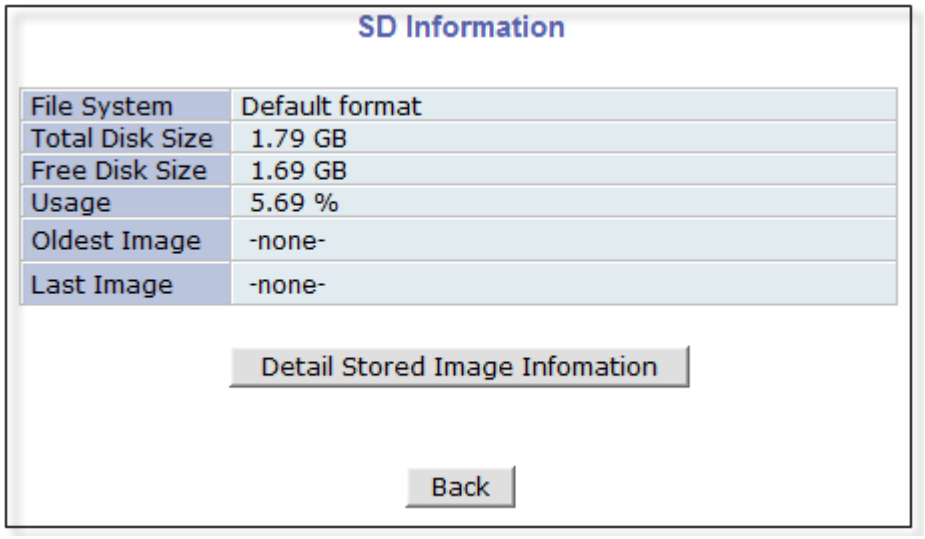


Note: if program is terminated during the "Format" process SD Card might be damaged

After formatting is completed the following screen will be displayed


Message from webpage
SD format is complete.
You will be presented with the SD List Page.
Once the format is complete, you need to reset system.
OK

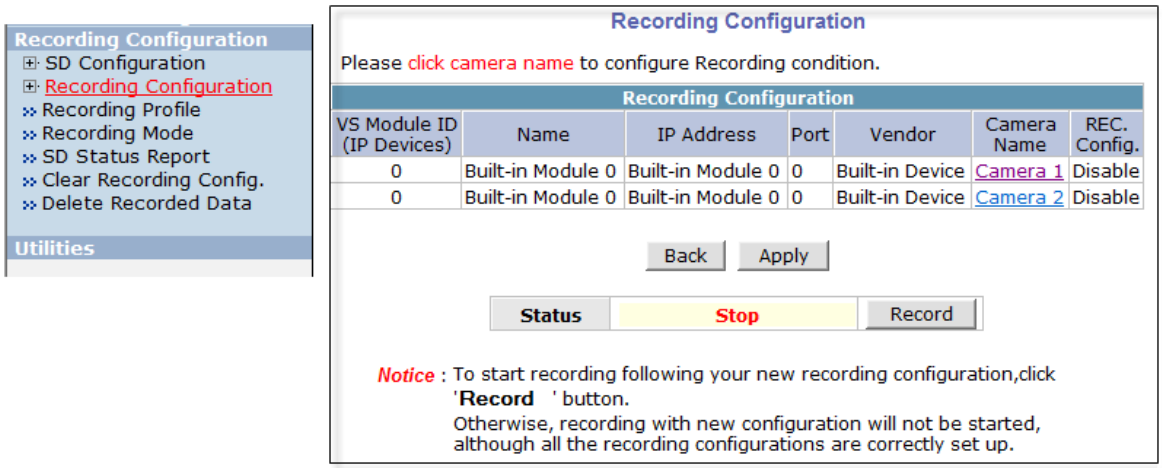
Click OK and you will be brought back to the "**SD Status & Format screen**" click on "Reboot" wait approximately 30 seconds and log back into the Admin screen. Open up "**Recording Configuration**" menu and click on "**SD Configuration**" then click on "**SD Information**" and the following screen will be displayed showing SD card info



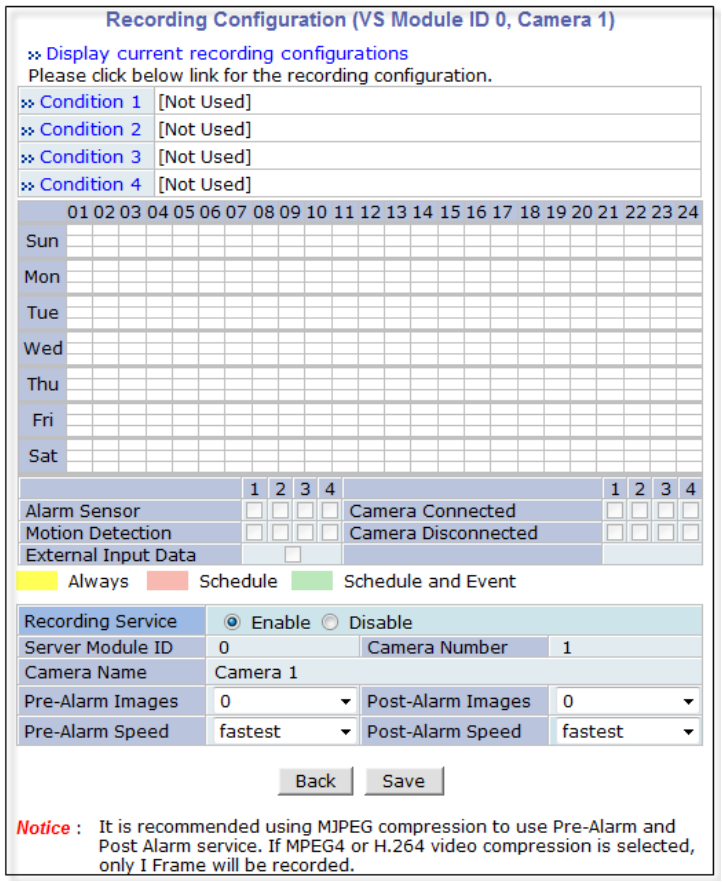
16.2. Recording Configuration with SD card

Each camera has 2 streams (referred as Camera 1 / Camera 2 (see image below)) which can be configured for recording options in this section. Configuration items include motion detection recording, 24-hour continuous recording, event-driven recording, etc.

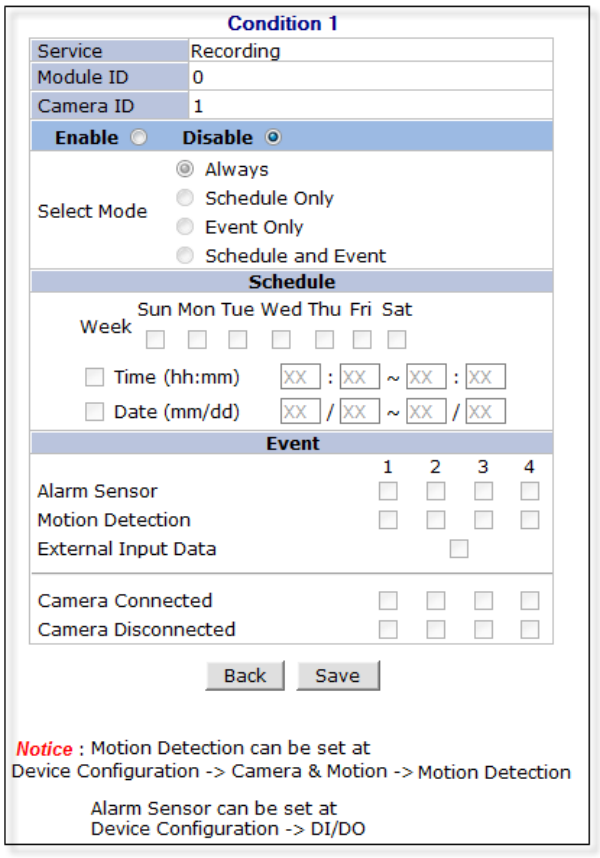
You can find out the list of streams (camera 1 / camera 2) with recording capability by clicking **Recording Configuration on the left side of your screen**. For example, you will see 2 streams (camera 1 / camera 2) from the list of **VS Module ID (IP Devices)**.



Below is an example of configuring the motion detection-triggered recording. It starts by clicking **Recording Configuration** and clicking on Camera1, the following screen will be display.

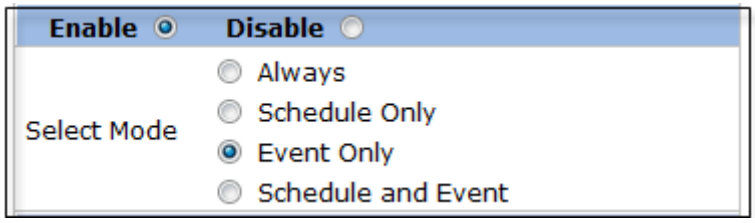


Select Condition 1and the following window will be display.



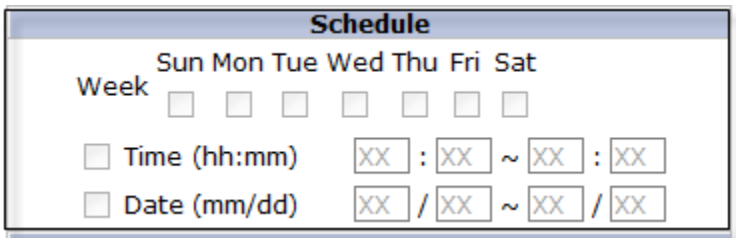
Enable / Disable

By clicking on **Enable** you will be able to select your mode (Always, Schedule only etc). in this example we will be selecting "**Event Only**".



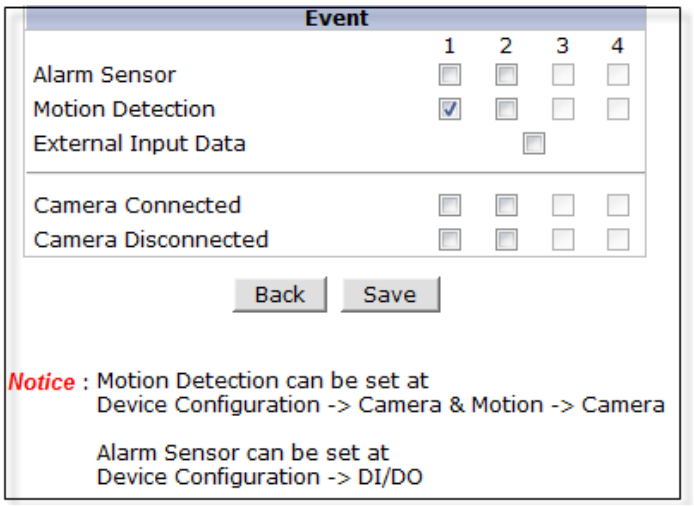
Schedule

Under **Schedule** you can select time and date for motion recording if left blank motion recording will be 24hrs, 7 days a week. In this example we will be leaving it blank (24/7).



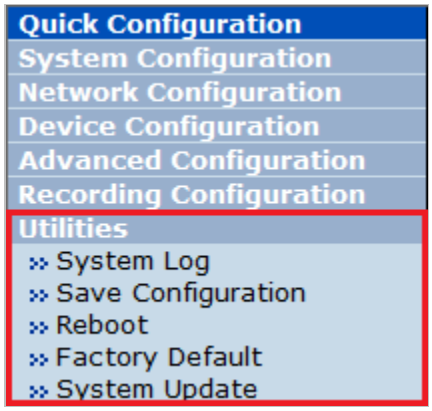
Event

Under **Event** click *Motion Detection* (stream 1 / stream 2). Click on Save to finish.



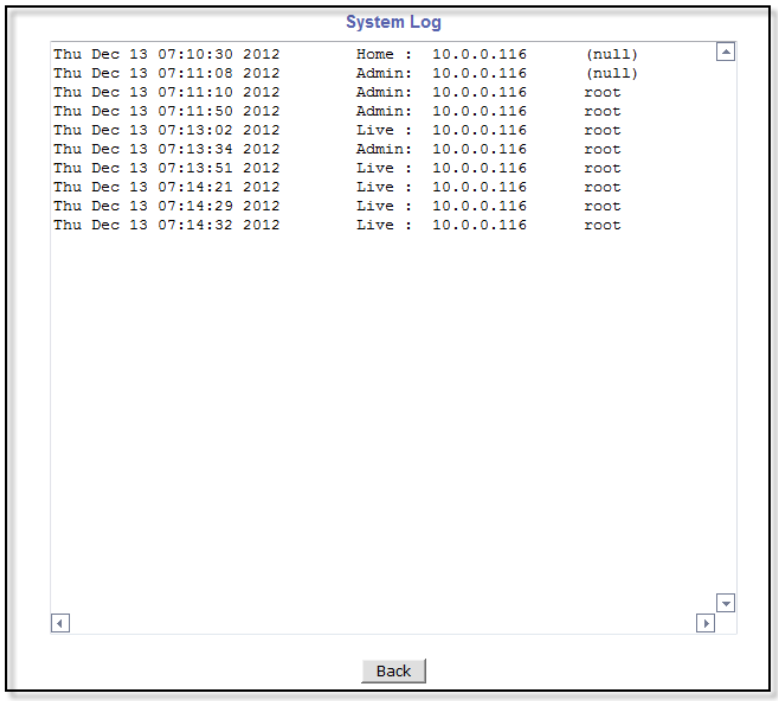
17. Utilities

In **Utilities** part of the Admin menu, you can view the **System Log** file, **Save Configuration**, **Reboot**, **Factory Default** and **System Update**.



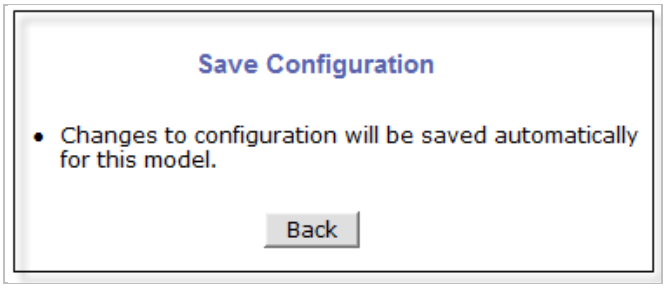
17.1. System Log

System log file provides you the information about when and who access' the contents of VITEK Cameras such as HTTP file or CGI programs. In each line, log data consists of date, time, category, IP address, user ID.



17.2. Save Configuration

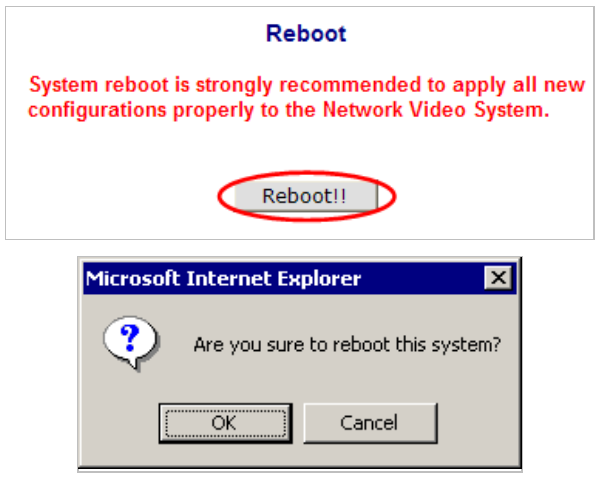
VITEK cameras save the configurations after every step.



17.3. Reboot

It is recommended to reboot the system after making changes to the configuration. To reboot, click **Reboot** on Utilities menu. A screen will display to confirm a system reboot, click ok to continue.

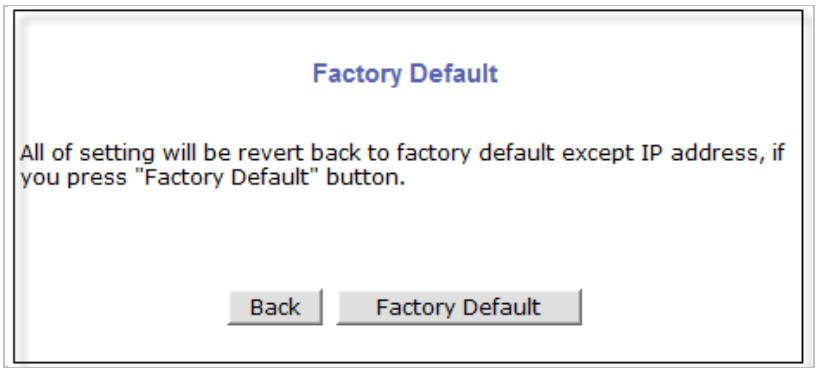
Windows Internet Explorer will ask to close the webpage, click Yes.

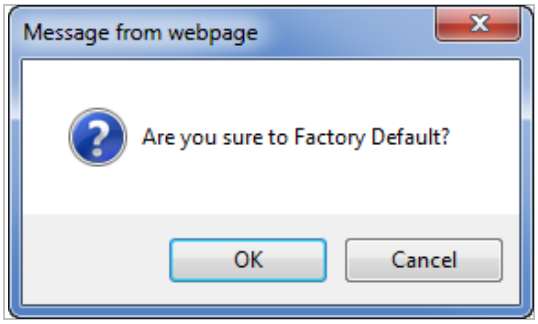

Reboot
System reboot is strongly recommended to apply all new configurations properly to the Network Video System.
Reboot!!
Microsoft Internet Explorer
Are you sure to reboot this system?
OK
Cancel

17.4. Factory Default

When required to restore the configuration of a Camera to factory default conditions, Network configuration is not affected by this action.

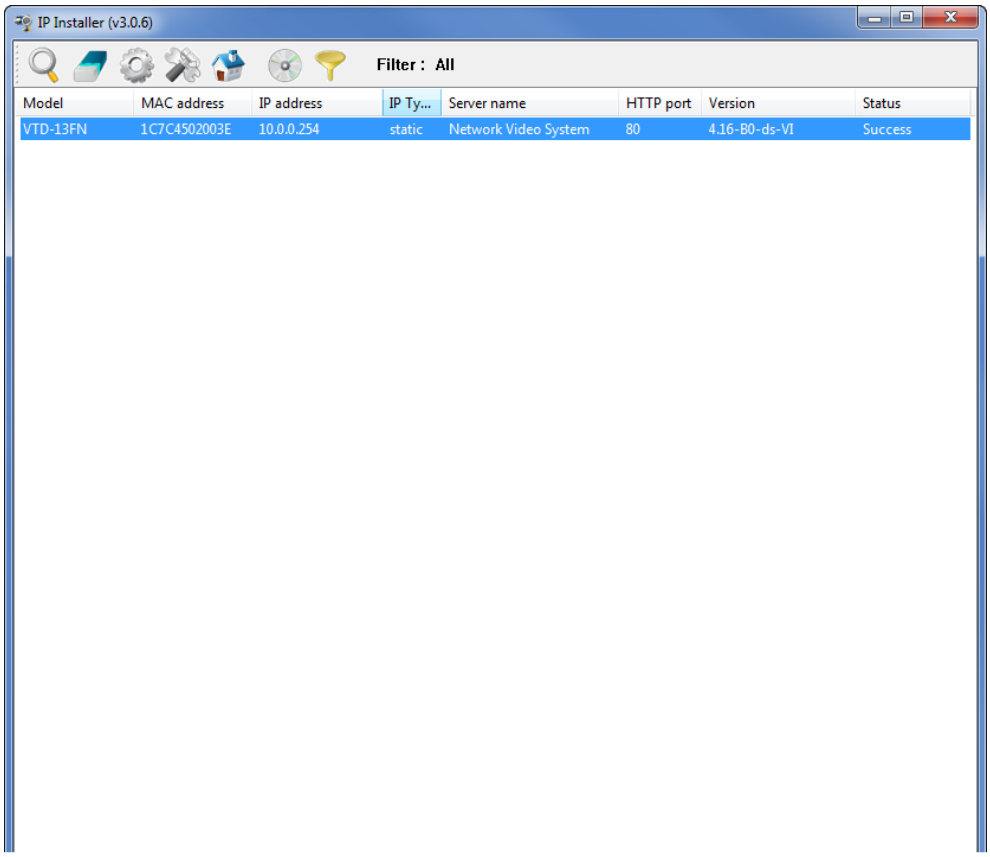
Click **Factory Default** on Utilities menu. A confirmation screen will be displayed as shown Click **Factory Default** button, otherwise click **Back** button to cancel it. The second confirmation screen will appear. Click **OK** button to restore the factory default condition right away. If you click **Cancel**, web browser will go back to the previous screen without any change made.


Factory Default
All of setting will be revert back to factory default except IP address, if you press "Factory Default" button.
Back
Factory Default

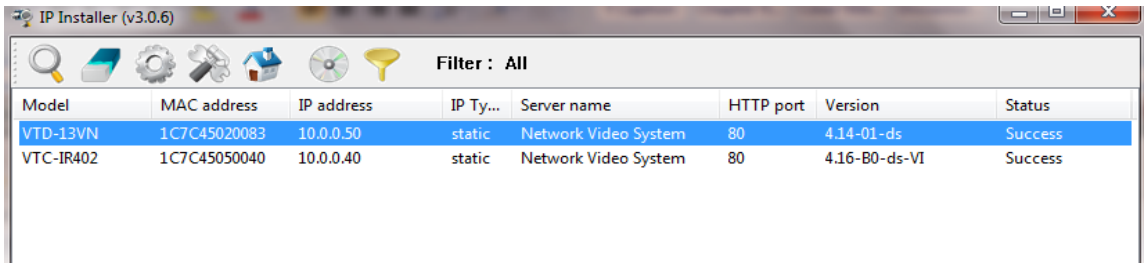


17.5. System Update

**** Is Highly Recommended to Use the IP Installer Program for This Process ****

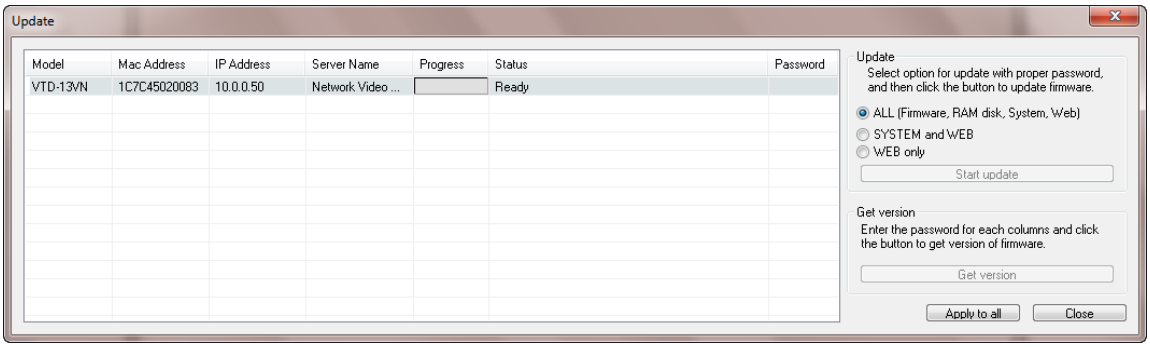


Once IP devices are searched and shown on the screen as functioning successfully, you can update the firmware of them using the "IP Installer" program. To do that, first check the firmware version of the device, which you can find on the IP Installer window.



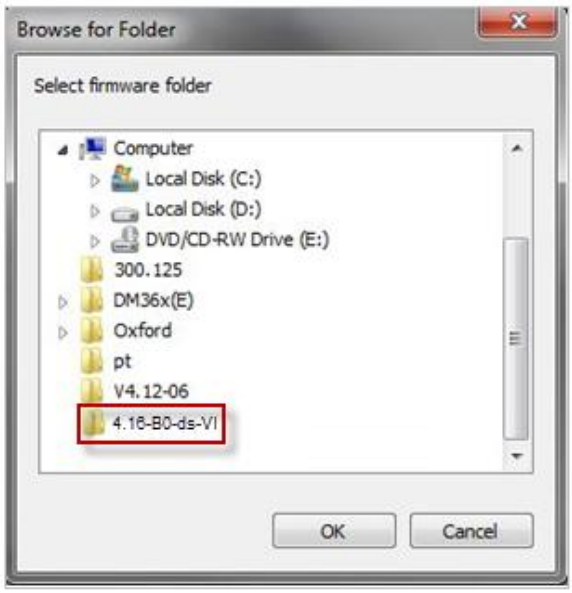
In the above picture, the firmware version of this product is 4.14-01-ds while the latest firmware version available is 4.16-B0-ds-VI as you can see at Vitek's homepage (http://www.vitekcctv.com/Downloads.asp). If you decide to update the firmware, first create a folder on your computer for the update firmware, than download the latest firmware to that folder.

Then select the IP device to be updated on IP Installer window, then click **Update Firmware** button from the toolbar. The following window will be displayed.

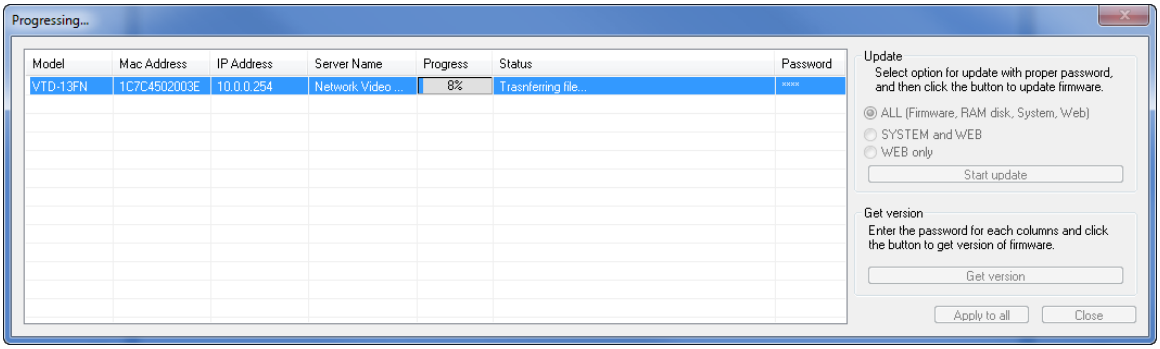


You may find the **Password** field is empty on the window shown above. If so, click the Password field of the IP device and enter the proper password for the device. You are not allowed to update the firmware if the correct password is not provided.

After the password is entered, the **Start Update** button will be enabled now. Click the button to see the following window for selecting the folder where the file has been saved. *Highlight the folder than click* **OK**.



After clicking OK the following window will be displayed.



Note: *Do not CLOSE window until completed, to avoid permanent damage to the camera.*

18. ENVI Series Viewer

18.1. Introduction

ENVI Series Viewer is an ActiveX program for Internet Explorer web browser, which enable users to control video and audio functions of network video devices over the TCP/IP network. ENVI Series Viewer works with EN-V-R network video software, Vitek Network Video Servers, Network Video Recorders, and Network Cameras to show real-time live video images and enables users to control audio, Relay Output, and PTZ functions. (Supported cameras)

18.2. Key Features

- Displays live video streams transmitted from Vitek Cameras / Servers
- Plays audio transmitted from Vitek Cameras / Servers (supported cameras)
- Transmits audio from PC with ENVI Series Viewer to Vitek Camera / Servers
- Stores live video screen as image files
- Stores live video streams as video files
- Controls Relay Output of Vitek Cameras / Servers (supported cameras)
- PTZ Controls (supported cameras)
- Supports the group mode to see specific channels (for Network Video Recorders only)
- Displays live videos in full screen mode
- Supports Flexible Extra System

18.3. System Requirement for PC

For best quality and performance, your computer needs to meet the minimum requirement as below.

- OS: Microsoft Windows XP Pro, Windows 7
- CPU: Intel Pentium 4, 2 GHz (Dual-Core or faster is recommended)
- System RAM: 2GB
- Video Card: 256MB Ram, 1024x768 Resolution
- 100 Mbps Network Adaptor

19. Installing and Uninstalling

19.1. Installing ENVI Series Viewer

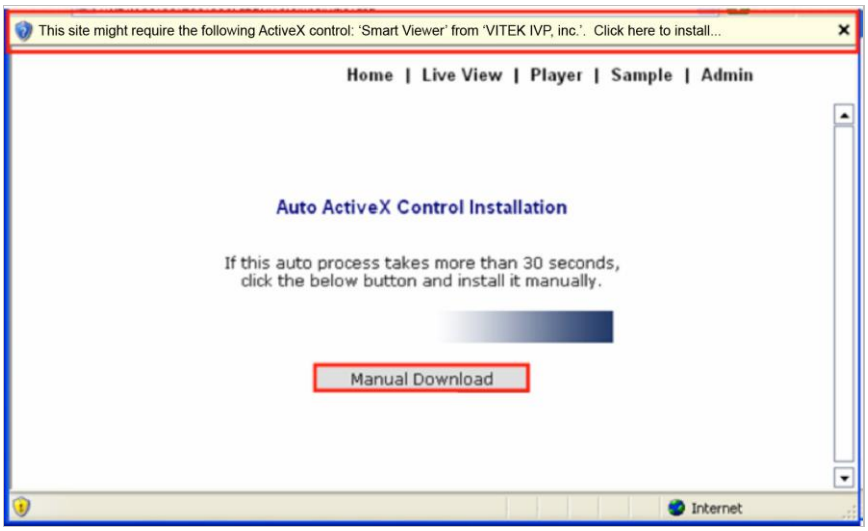
Connect to the Vitek Camera/Server using Internet Explorer, and click Live View on the main page. Then ENVI Series Viewer will be automatically downloaded and installed. If an Internet connection is not available, it's possible to manually install the program file in advance (from supplied CD) and connect to the Vitek Camera / Server later.

19.1.1. Installing on Web Browser

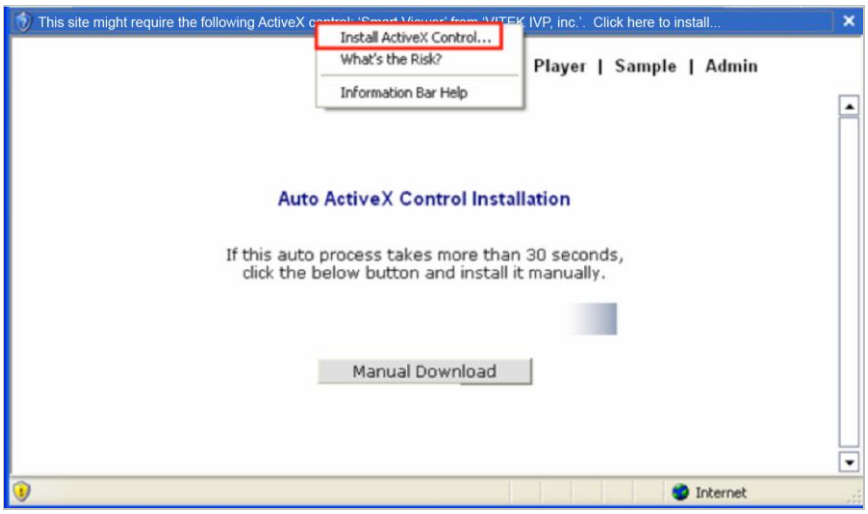
Click 'Live View' after access to Vitek® Server on Internet Explorer.

Home | Live View | Admin
VITEK
INDUSTRIAL VIDEO PRODUCTS, INC.
An Eye on Innovation.
Model : VTD-13VRN, Firmware ver 4.14-01-ds
Homepage ver 4.14-01_VI for Network Video System

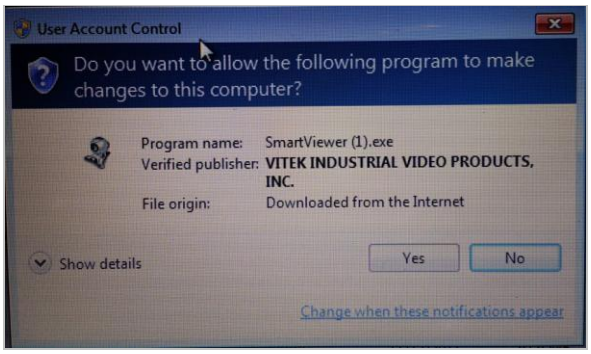
If you're using Windows XP Service Pack 2 or later, the Information message will show up as seen below. Click the Information message.


This site might require the following ActiveX control: 'Smart Viewer' from 'VITEK IVP, inc.'. Click here to install...
Home | Live View | Player | Sample | Admin
Auto ActiveX Control Installation
If this auto process takes more than 30 seconds,
click the below button and install it manually.
Manual Download
Internet

If the Information message doesn't come up due to the problems like network failure, you can start the manual installation as shown in the next section.


This site might require the following ActiveX control: 'Smart Viewer' from 'VITEK IVP, inc.'. Click here to install...
Install ActiveX Control...
What's the Risk?
Information Bar Help
Player | Sample | Admin
Auto ActiveX Control Installation
If this auto process takes more than 30 seconds,
click the below button and install it manually.
Manual Download
Internet

Click the **Install ActiveX Control**, and the pop-up window will be displayed as above. Click the **Install** button.


User Account Control
Do you want to allow the following program to make changes to this computer?
Program name: SmartViewer (1).exe
Verified publisher: VITEK INDUSTRIAL VIDEO PRODUCTS, INC.
File origin: Downloaded from the Internet
Show details
Yes
No
Change when these notifications appear

Click **"YES"** to allow program to run.

After the installation is successfully completed, ENVI Series Viewer window will be displayed.

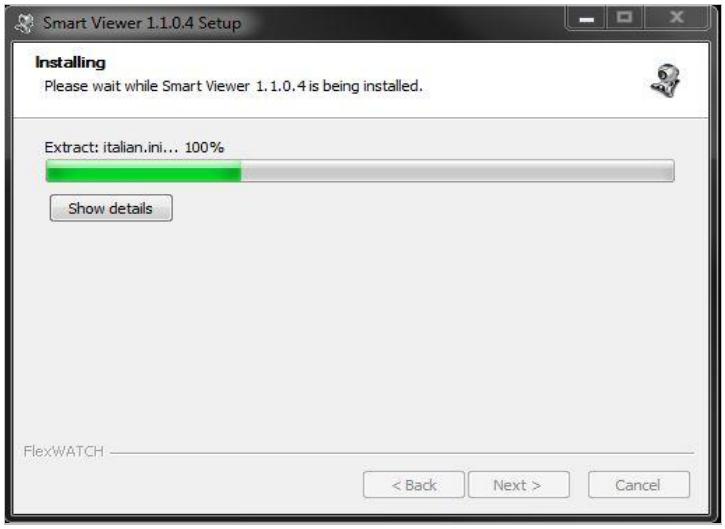
Home | Live View | Admin
VITEK
INDUSTRIAL VIDEO PRODUCTS, INC.
An Eye on Innovation.
Model : VT-PTZ220NP, Firmware ver 4.16-B0-ds-VI
Homepage ver 4.16-B0_VI for Network Video System

19.1.2. Manual Installation

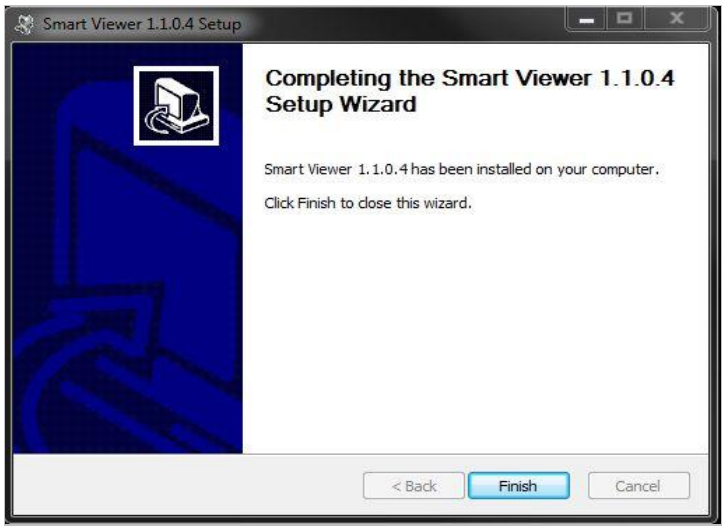
When an Internet connection is not available or having some difficulties, you can manually install from the supplied CD using ENVI Series Viewer program file. Execute the downloaded file, and you will see the ENVI Series Viewer Setup Wizard window as shown below. Click the **Install** button to start installing.

Smart Viewer 1.1.0.4 Setup
Welcome to the Smart Viewer 1.1.0.4 Setup Wizard
This wizard will guide you through the installation of Smart Viewer 1.1.0.4.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Install to start the installation.
Install
Cancel

The following window will be displayed during the installation.



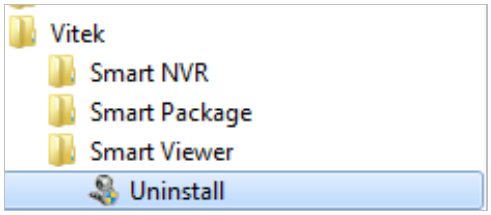
After installation is successfully completed, the following window will be displayed. Click the **Finish** button.


Smart Viewer 1.1.0.4 Setup
Completing the Smart Viewer 1.1.0.4 Setup Wizard
Smart Viewer 1.1.0.4 has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

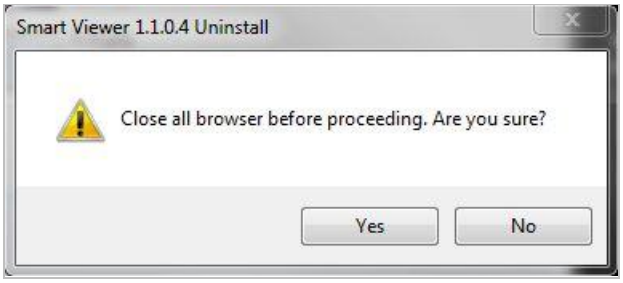
19.2. Uninstalling ENVI Series Viewer

There are two ways to uninstall ENVI Series Viewer program from your computer. Before uninstalling, close all the Internet Explorer windows.

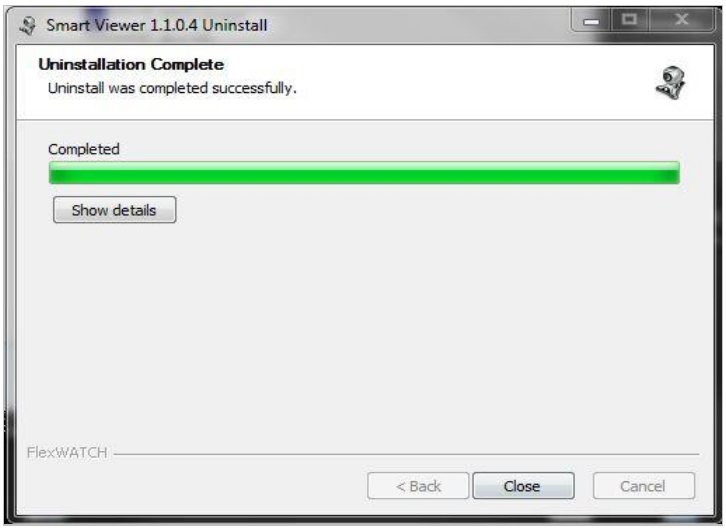
19.2.1. Uninstalling with Program Menu



Click **Uninstall** and the following window will be shown. Click the **Yes** button.



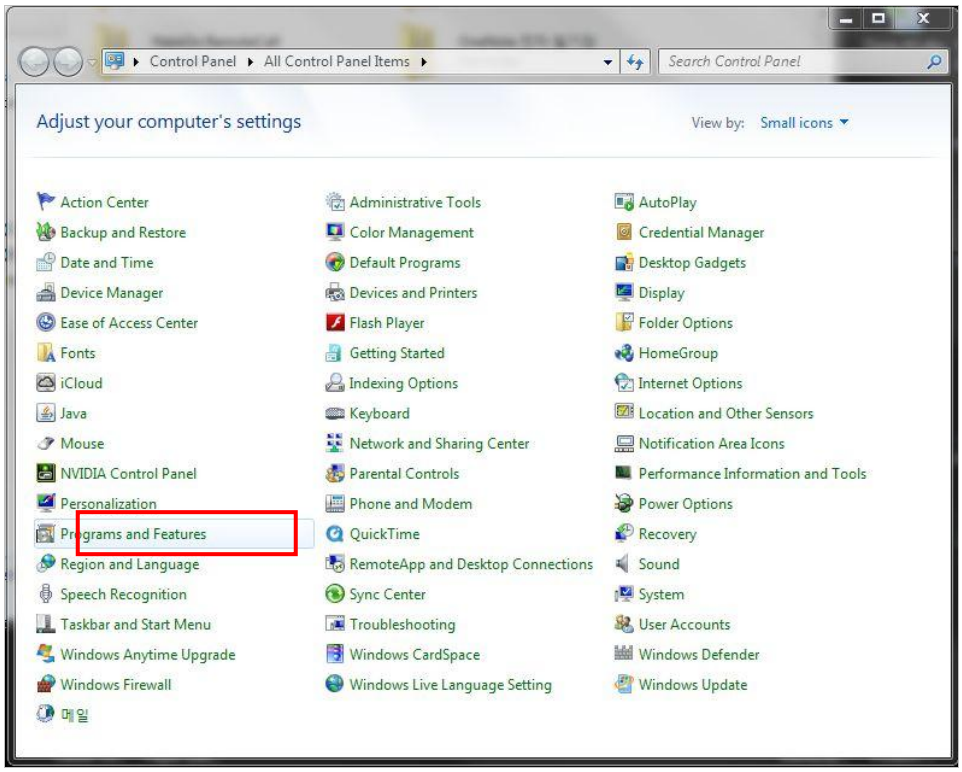
If the uninstall is successful, the following window will be displayed. Click **CLOSE** to finish.



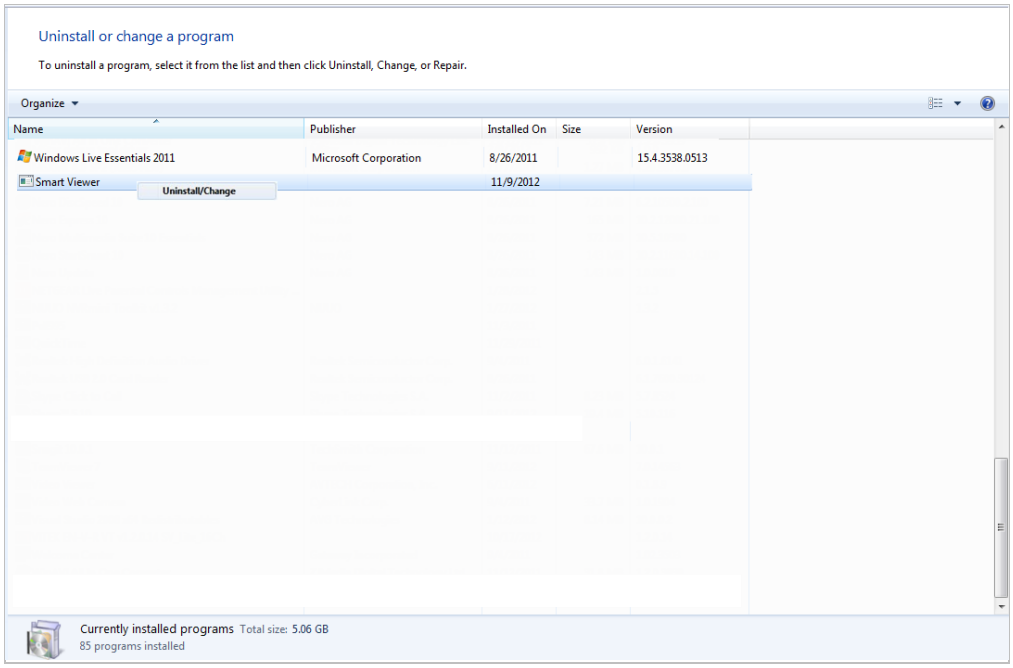
19.2.2. Uninstalling on Control Panel

Click **Start** button on the screen, then select the **Control Panel**.

In the Control Panel window, double-click the **Add or Remove Programs** icon.



You will see the **Currently installed programs** list. Click **ENVI Series / (Smart Viewer)** button,



You will see the **Uninstall or change a program** list. Click **ENVI Series / (Smart Viewer)** button, and then right click **Uninstall /Change** button. Then, it will start uninstalling the program.

20. Starting ENVI Series Viewer

Once ENVI Series Viewer is installed in your computer, you can start it by connecting to the Vitek Camera / Server using Internet Explorer and select **Live View** on the main menu.

The appearance of ENVI Series Viewer window varies depending on what type of Vitek Server is connected (Network Video Server, Network Camera, or Network Video Recorder).

- ENVI Series Viewer window for Network Video Server or Network Camera

Control Bar
Home | Live View | Admin
Opens the Instant Playback Viewer.
Start or finish manual recording to the built-in MicroSD card in (1 minute max). Configure prior to recording.
Save currently displayed Live video as an AVI file to your local computer (10 minute max).
Create a Snapshot of the currently displayed Live Video.
Channel Control Bar
PTZ Control Bar
Audio Control Bar

20.1. Control Bar

Displays and hides Channel control bar

Displays and hides PTZ control bar

Displays and hides Audio control bar

Display image by aspect ratio

Displays image normal screen

Display Enhancer on/off (uses more CPU)

Display Full / Normal screen

Displays image in original size

System Information Display

20.2. Channel Control Bar

Displays or hides live view video from channel 1

Displays or hides live view video from channel 2

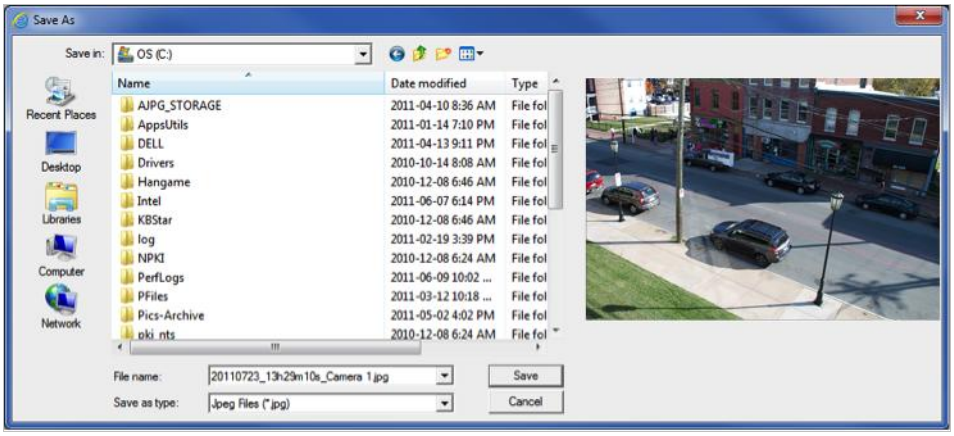
Displays or hides live view video from ALL channels

No Display

20.3. OSD Channels Buttons

20.3.1. Saving as Image File

In ENVI Series Viewer, Live video currently displayed can be captured and saved as an image file either in JPEG or BMP format. Select the live view video you want saved, and click **Snapshot** button on **OSD Channel Buttons**. The following window will be displayed.

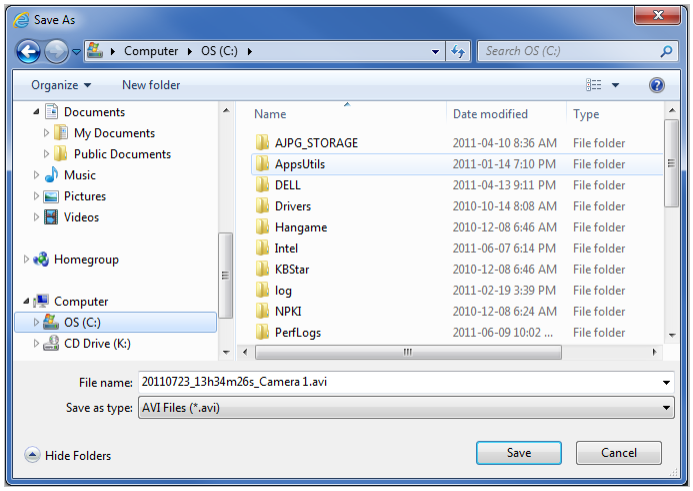


In this dialog box, you see the captured image to be saved. Enter the folder and file name, and click the **Save** button, then the image will be saved with the name you entered.

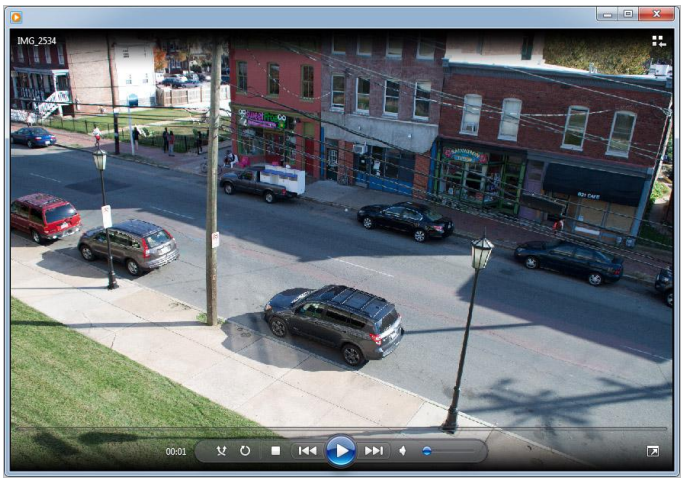
Note: If live view video is in MJPEG format, the image will be saved as a JPEG file. If the video is in MPEG-4 or H.264 format, it will be saved in BMP format.

20.3.2. Saving as Video File

In ENVI Series Viewer, Live video currently displayed can be captured and recorded as a video file in AVI format. Select a live view you want to save, and click **RecAvi** button on **OSD Channel Buttons**. Clicking it again will stop recording. Max duration is 10 minutes and recording will be stopped after 10 min if left un-clicked.



In video files recorded from M-JPEG format video, the time information file will be generated in SMI subtitle format, which puts time stamp every second. When you play back the recorded video, the time stamp will be displayed as a subtitle on the video screen as shown in the picture below. (Upper left)



Note: When you play back videos recorded from MPEG-4 or H.264, proper CODEC's may be required.

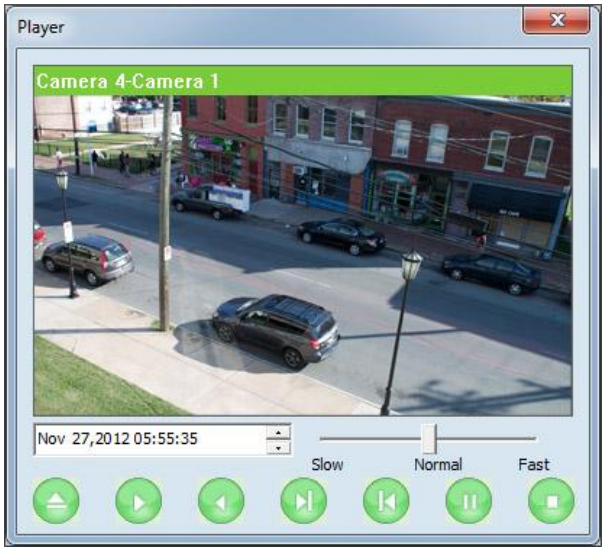
20.3.3. Manual Recording

To manual record from network cameras with built-in local storage (SD Card), live video can be

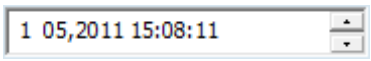
recorded to the SD Card by clicking this button. The recorded video can be viewed by **Instant Playback** feature of OSD Channel Buttons or by running ENVI Series Player program. To finish, click the icon again. *Max duration is 1 minute* and recording will be stopped after 1 minute.

20.3.4. Instant Playback

For network cameras with local storage (SD Card), Instant Playback is supported. Clicking the Instant Playback button from the OSD menu will open the window below.

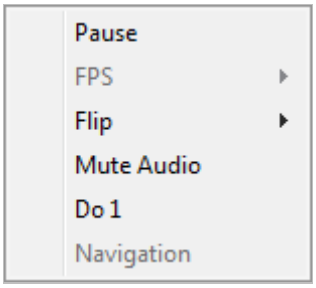


Instant playback will scan the video data up to 1 min before it was executed. And scanned data will be played automatically

	Set the beginning of video data. Instant playback will scan 1 min after this.
	Se the playback speed.
	Begin searching data
	Playback
	Reverse playback.
	1 frame playback
	1 frame reverse playback
	Pause
	Stop

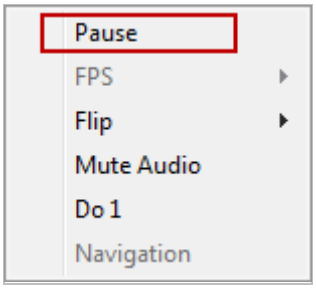
20.4. Extended Features

When you click the right mouse button on the Live View Window, a pop-up menu will appear for extended features as shown below.



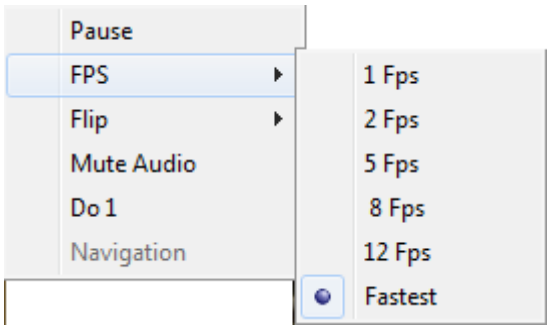
20.4.1. Pausing Live Video

Click the **Pause** button to stop and resume live view video.



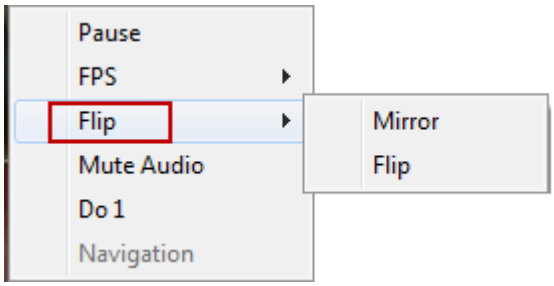
20.4.2. FPS Control

FPS (Frame per Second) can be controlled only in MJPEG mode. In MPEG4 and H.264 video mode, FPS control is not supported.



20.4.3. Flip Control

Flip Control: The horizontal view of the image can be changed using the (mirror) function. The vertical view of the image can be changed using the (flip) function.

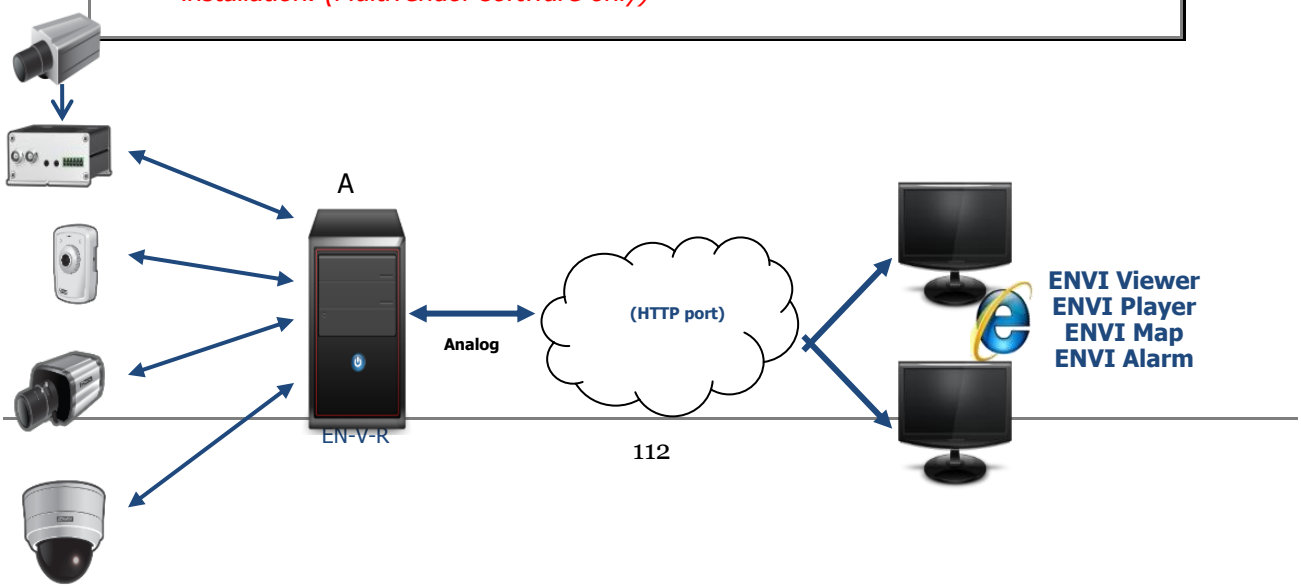


21. EN-V-R: Introduction

This User's manual explains how to set up EN-V-R software in your PC. EN-V-R is the integrated system software for video security applications, which runs on Microsoft's Windows-based computers. Some of major features of EN-V-R are listed below.

- Provides main features of Live view, Playback, Record, Backup
- Event, motion, scheduled recording & conditional playback
- Motion-JPEG, MPEG-4, H.264 stream supported
- Supports various vendors' IP devices (Multi Vendor Version only) for recording and retransmission of video, voice, and data
- Supports Megapixel cameras (up to 3M pixels)
- Users can connect to EN-V-R via web browsers to access live video, Audio, and data, and search for video to play back
- Up to 128 channels supported for cameras

Note: A product-key is required for proper installation of EN-V-R program. You can still install EN-V-R in 10-working day trial mode if a product-key is not entered during installation. (Multivendor software only)



22. Requirements for Installation

22.1. EN-V-R Versions

EN-V-R is supplied to customers in different versions for each appropriate application. Users will need to choose the right versions for their needs.

Version Types	Register Channels	Time Restriction	Recording Channels	Retransmission Streams	Support Other vendors	Max Recoding Capacity
Evaluation	128	10 days	128	256	Yes	160 TB
Free	16	N/A	16	64	No	160 TB
Multivendor	9	N/A	9	36	Yes	160 TB
	16	N/A	16	64	Yes	160 TB
	32	N/A	32	128	Yes	160 TB
	64	N/A	64	256	Yes	160 TB
	128	N/A	128	512	Yes	160 TB

22.2. System Requirement for PC

For best quality and performance, your computer needs to meet the minimum requirement as below.

- Microsoft Windows XP Pro, Windows 7 Pro or higher, Video Card(256MB Ram, 1024x768 or higher)

Compression	# of Channels	Resolution	Recommended CPU	Memory
H.264	16 Channels	D1	Intel Core2Duo T5200	1.0GB
		720P	Intel Core2Duo E7550	1.5GB
		1080P	Intel Core i-5-2500S	2.0GB
	32 channels	D1	Intel Core2Duo E6700	1.0GB
		720P	Intel Core i-5 750	2.0GB
		1080P	Intel Core i-7 970	4.0GB
	64 channels	D1	Intel Core i-5 661	1.5GB
		720P	Intel Xeon X5660	4.0GB
		1080P	Intel Xeon X5680 Dual CPU	4.0GB
	128 channels	D1	Intel Xeon X5507 Dual CPU	4.0GB
		720P	Intel Xeon X5670 Dual CPU	6.0GB
		1080P	Intel Xeon E7-4850 Dual CPU	6.0GB
Motion-JPEG	16 Channels	D1	Intel Core2Duo E6700	1.0GB

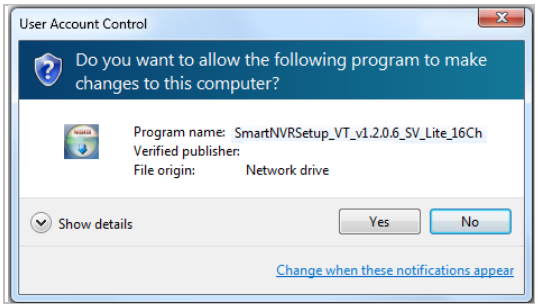
		720P	Intel Core i-5 460M	1.5GB
		1080P	Intel Core i-5 -2500	3.0GB
	32 channels	D1	Intel Core i-5 661	1.5GB
		720P	Intel Core i-5 -2400S	2.0GB
		1080P	Intel Xeon X5590 Dual CPU	4.0GB
	64 channels	D1	Intel Core i-5 -2500	3.0GB
		720P	Intel Xeon X5550 Dual CPU	4.0GB
		1080P	Intel Xeon E7-4850 Dual CPU	6.0GB
	128 channels	D1	Intel Xeon X5687 Dual CPU	4.0GB
		720P	Intel Xeon X5690 Dual CPU	6.0GB
		1080P	Intel Xeon E7-4850 Dual CPU	6.0GB

Note: Above PC requirements are based on running EN-V-R program only. If other software needs to run along with EN-V-R at the same time, you may need additional performance level for your PC. It is recommended to check actual performance and disk capacity before selecting a PC for EN-V-R.

23. Installing EN-V-R

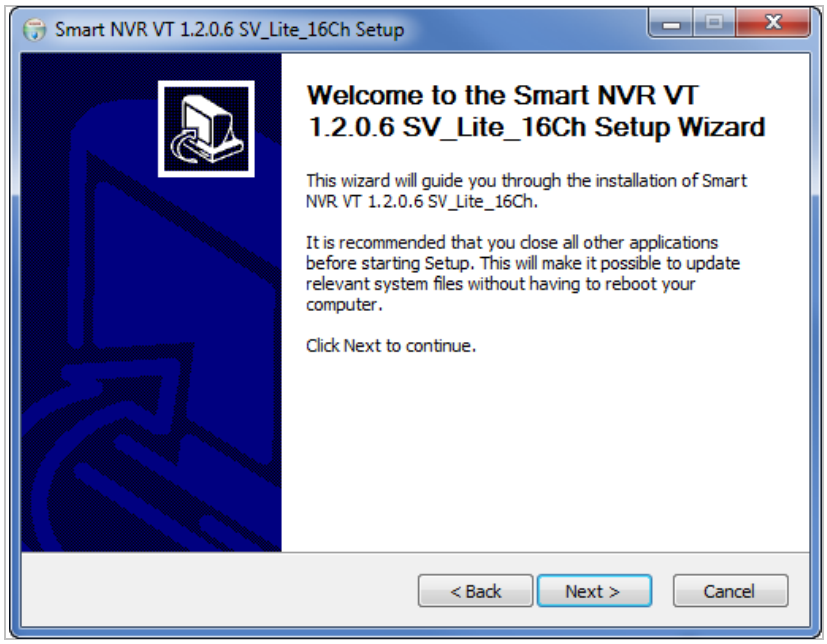
After downloading EN-V-R, double click EN-V-R Setup icon to start installation. The following window will be displayed on the screen. Before installing, check the version of the EN-V-R which is shown on the window.

You may encounter the following security warning. To continue installing the program, click **Yes** button.



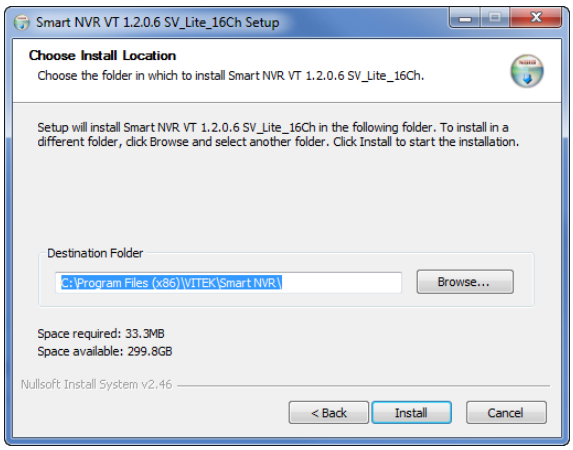
Then select language for installation.

You will see the below window, then click **Next** button.

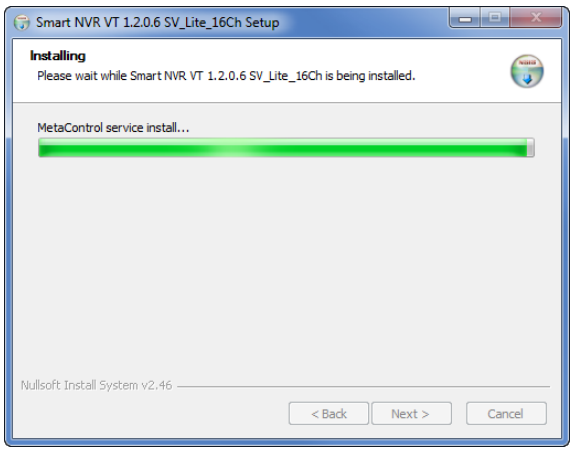

Smart NVR VT 1.2.0.6 SV_Lite_16Ch Setup
Welcome to the Smart NVR VT 1.2.0.6 SV_Lite_16Ch Setup Wizard
This wizard will guide you through the installation of Smart NVR VT 1.2.0.6 SV_Lite_16Ch.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
< Back
Next >
Cancel

The default location for installation is **C:\Program Files\Vitek**. It is recommended to install in this folder, but if you want to change it to another location, click **Browse** button to choose a proper path.

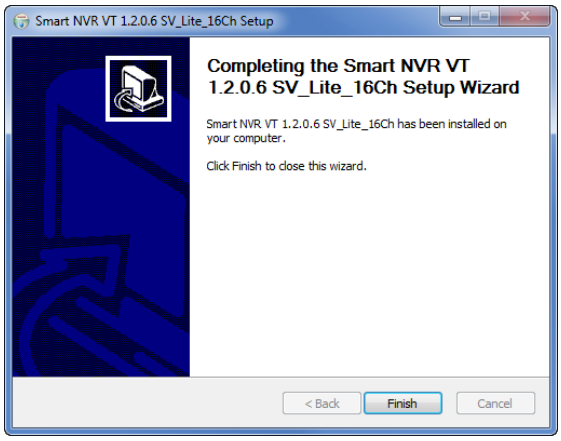
Now click **Install** button.


Smart NVR VT 1.2.0.6 SV_Lite_16Ch Setup
Choose Install Location
Choose the folder in which to install Smart NVR VT 1.2.0.6 SV_Lite_16Ch.
Setup will install Smart NVR VT 1.2.0.6 SV_Lite_16Ch in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files (x86)\VITEK\Smart NVR\
Browse...
Space required: 33.3MB
Space available: 299.8GB
Nullsoft Install System v2.46
< Back
Install
Cancel

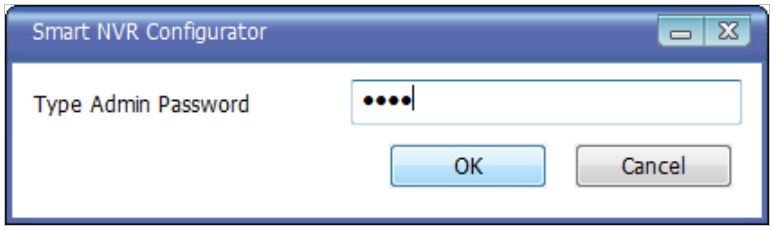
You will see the progress of copying install files to the hard drive as shown below, once is completed click on NEXT.


Smart NVR VT 1.2.0.6 SV_Lite_16Ch Setup
Installing
Please wait while Smart NVR VT 1.2.0.6 SV_Lite_16Ch is being installed.
MetaControl service install...
Nullsoft Install System v2.46
< Back
Next >
Cancel

Click Finish to complete the Installation.

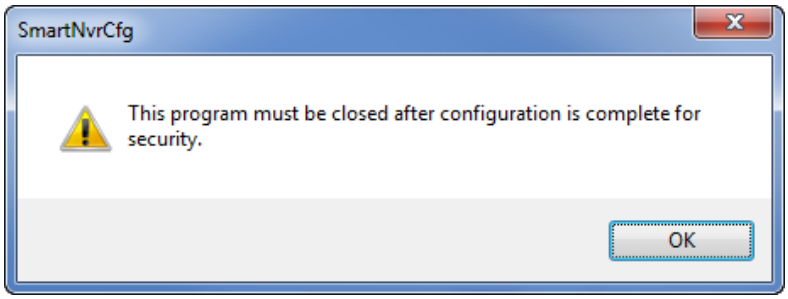

Smart NVR VT 1.2.0.6 SV_Lite_16Ch Setup
Completing the Smart NVR VT 1.2.0.6 SV_Lite_16Ch Setup Wizard
Smart NVR VT 1.2.0.6 SV_Lite_16Ch has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

After installing EN-V-R program for the first time, it needs to be configured before use, so it automatically executes the configuration program, which is called **EN-V-R Configurator**.

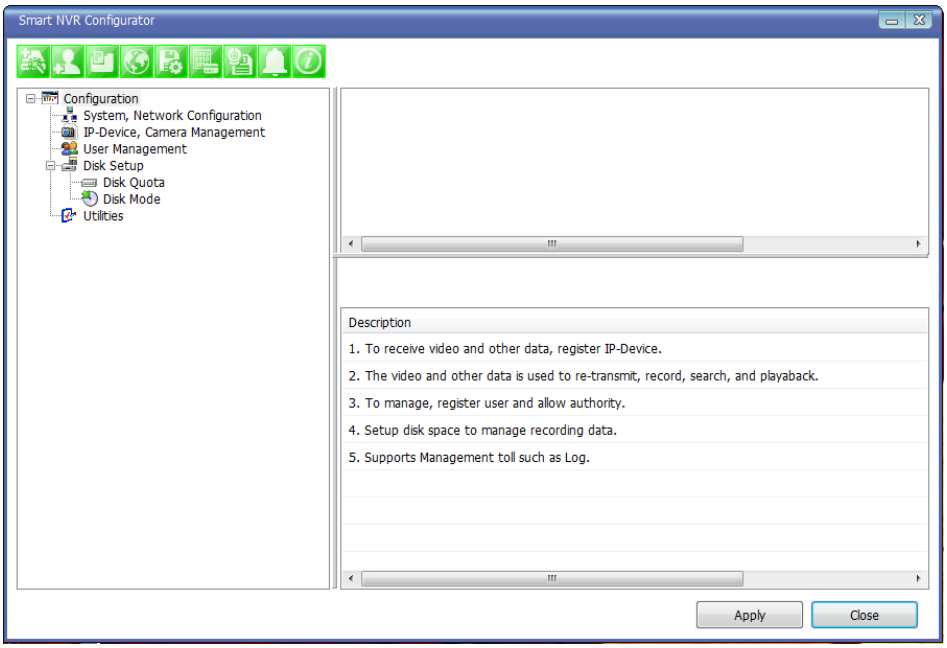


Enter the proper Admin Password. The default password is **root**.

The following screen will be displayed, click OK to continue.



Now you will see **EN-V-R Configurator** window on the screen.


Smart NVR Configurator
Configuration
System, Network Configuration
IP-Device, Camera Management
User Management
Disk Setup
Disk Quota
Disk Mode
Utilities
Description
1. To receive video and other data, register IP-Device.
2. The video and other data is used to re-transmit, record, search, and playback.
3. To manage, register user and allow authority.
4. Setup disk space to manage recording data.
5. Supports Management toll such as Log.
Apply
Close

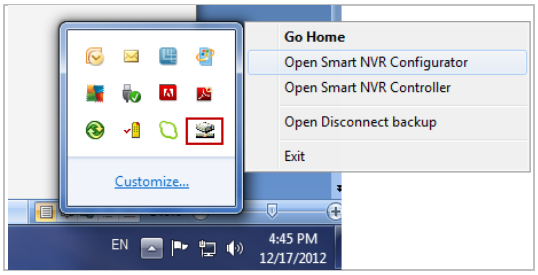
For more information about the EN-V-R Configurator program, refer to **Section 26. Starting EN-V-R Configurator on page 120.**

24. Uninstalling EN-V-R

24.1. Closing Active EN-V-R

If you need to uninstall EN-V-R, first you need to make sure EN-V-R program is not running on your computer by checking the system icon. As you see on the following picture, you can easily find out if EN-V-R service running.

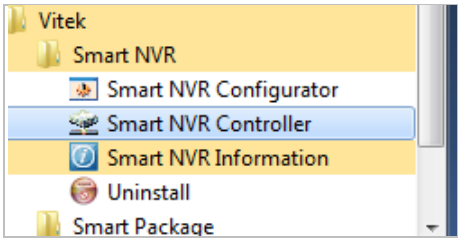
If EN-V-R is not running, you can go ahead to the next section of uninstalling the program. If EN-V-R is active, place the mouse pointer on the EN-V-R icon, and click the right mouse button. You'll see the pop-up menu. Select **Exit**.



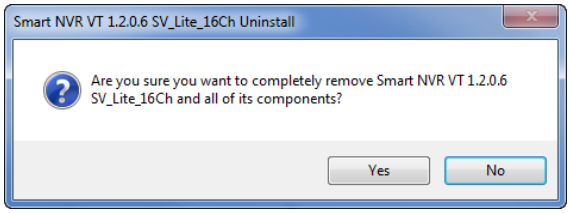
Then the EN-V-R icon disappears, and you know that EN-V-R is no longer running on your computer. Now you're ready to start uninstalling.

24.2. Executing Uninstaller

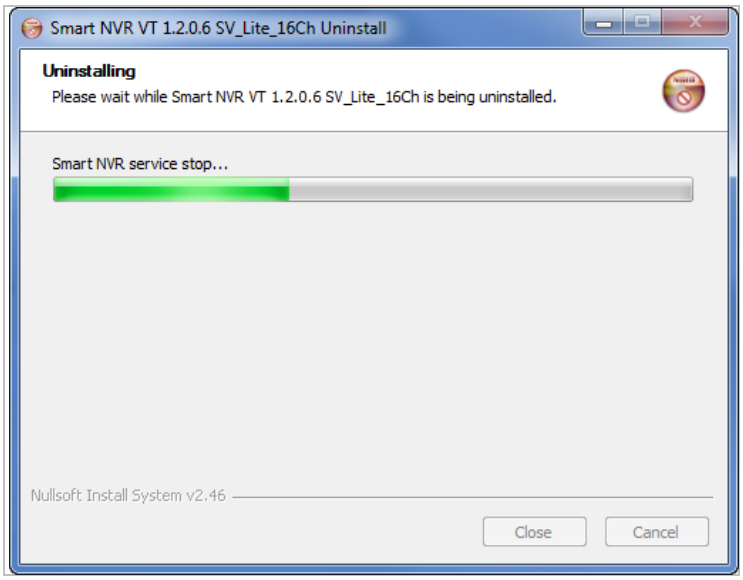
To start uninstalling, click **Start >All Programs >Vitek>EN-V-R>Uninstall**.



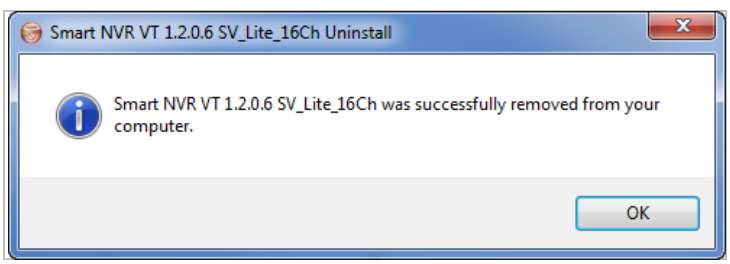
When the following window appears, click **YES** button.


Smart NVR VT 1.2.0.6 SV_Lite_16Ch Uninstall
Are you sure you want to completely remove Smart NVR VT 1.2.0.6 SV_Lite_16Ch and all of its components?
Yes
No

The progress of uninstalling is displayed.


Smart NVR VT 1.2.0.6 SV_Lite_16Ch Uninstall
Uninstalling
Please wait while Smart NVR VT 1.2.0.6 SV_Lite_16Ch is being uninstalled.
Smart NVR service stop...
Nullsoft Install System v2.46
Close
Cancel

After all the install files are deleted, the following window will be displayed. Click **OK** button on the following window to complete the uninstalling.



25. Components of EN-V-R Program

EN-V-R consists of three programs, (***EN-V-R Service, EN-V-R Configurator, and EN-V-R Controller***).

25.1. EN-V-R Configurator

EN-V-R Configurator is used to set up various parameters and conditions of EN-V-R Service. Users can register, modify, and delete IP devices and users with this program. It also provides configuring tools for recording, alarm, event, and other functions.

25.2. EN-V-R Service

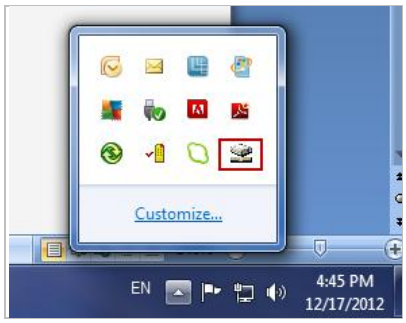
EN-V-R program is a Windows service and runs in a background mode, which means that it is not shown on the Windows desktop. EN-V-R receives video, audio, alarm, even data from IP devices over the network, and then it can record the data on the hard drive or retransmit to users. Starting, terminating and restarting of EN-V-R program can be done by using EN-V-R Configuration or EN-V-R Controller.

25.3. EN-V-R Controller

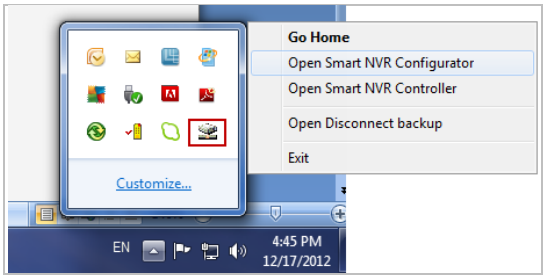
EN-V-R Controller program is used to start or stop the EN-V-R service.

25.4. EN-V-R System Tray Menu

After you finish installing EN-V-R, you will find the EN-V-R icon on the system tray, which is located right, bottom part of the Windows desktop.

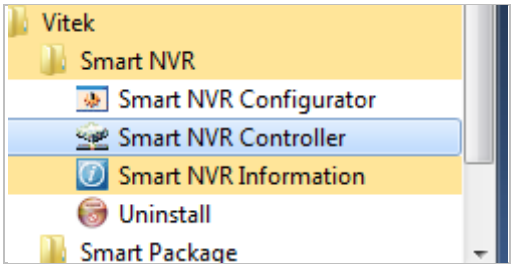


Move the cursor over the icon, and right click. The following pop-up menu will show. You can open EN-V-R Configurator or EN-V-R Controller program from this menu, or you can go to the Home page of the EN-V-R program for live view or playback.

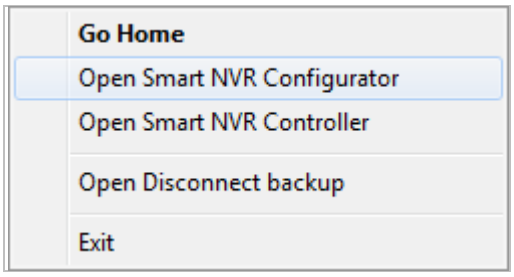


26. Starting EN-V-R Configurator

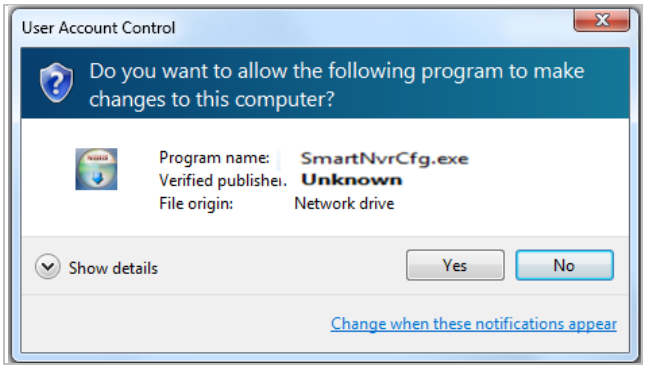
EN-V-R Configurator starts automatically right after installation is completed; you may also click the EN-V-R icon on the Windows desktop.



If EN-V-R program is already running in background, you may also select the EN-V-R icon on the system tray by clicking right button of the mouse.

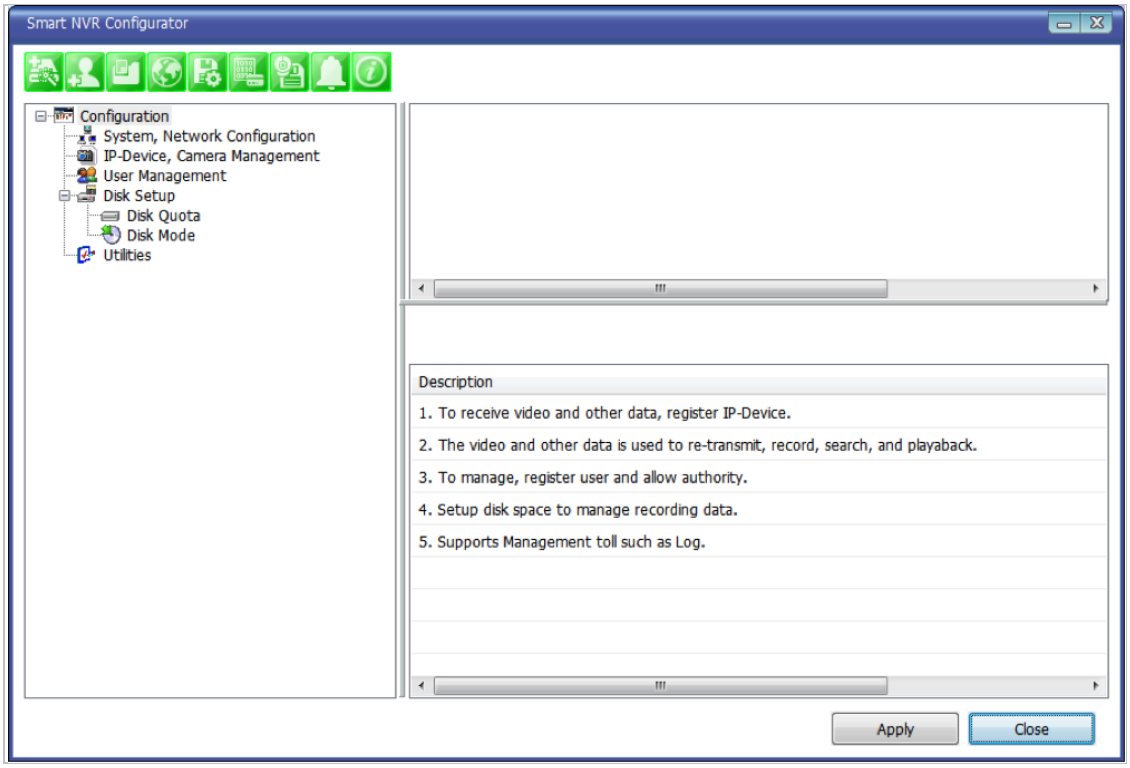


You may encounter the security window as below. Click **Yes** button to continue.


User Account Control
Do you want to allow the following program to make changes to this computer?
Program name: SmartNvrCfg.exe
Verified publisher: Unknown
File origin: Network drive
Show details
Yes
No
Change when these notifications appear

Once EN-V-R program starts, a log-in window will be displayed as below. Type in the proper admin password and click the **OK** button. The default admin / password is **root**.

Now EN-V-R Configurator window will be displayed.


Smart NVR Configurator
Configuration
System, Network Configuration
IP-Device, Camera Management
User Management
Disk Setup
Disk Quota
Disk Mode
Utilities
Description
1. To receive video and other data, register IP-Device.
2. The video and other data is used to re-transmit, record, search, and playback.
3. To manage, register user and allow authority.
4. Setup disk space to manage recording data.
5. Supports Management toll such as Log.
Apply
Close

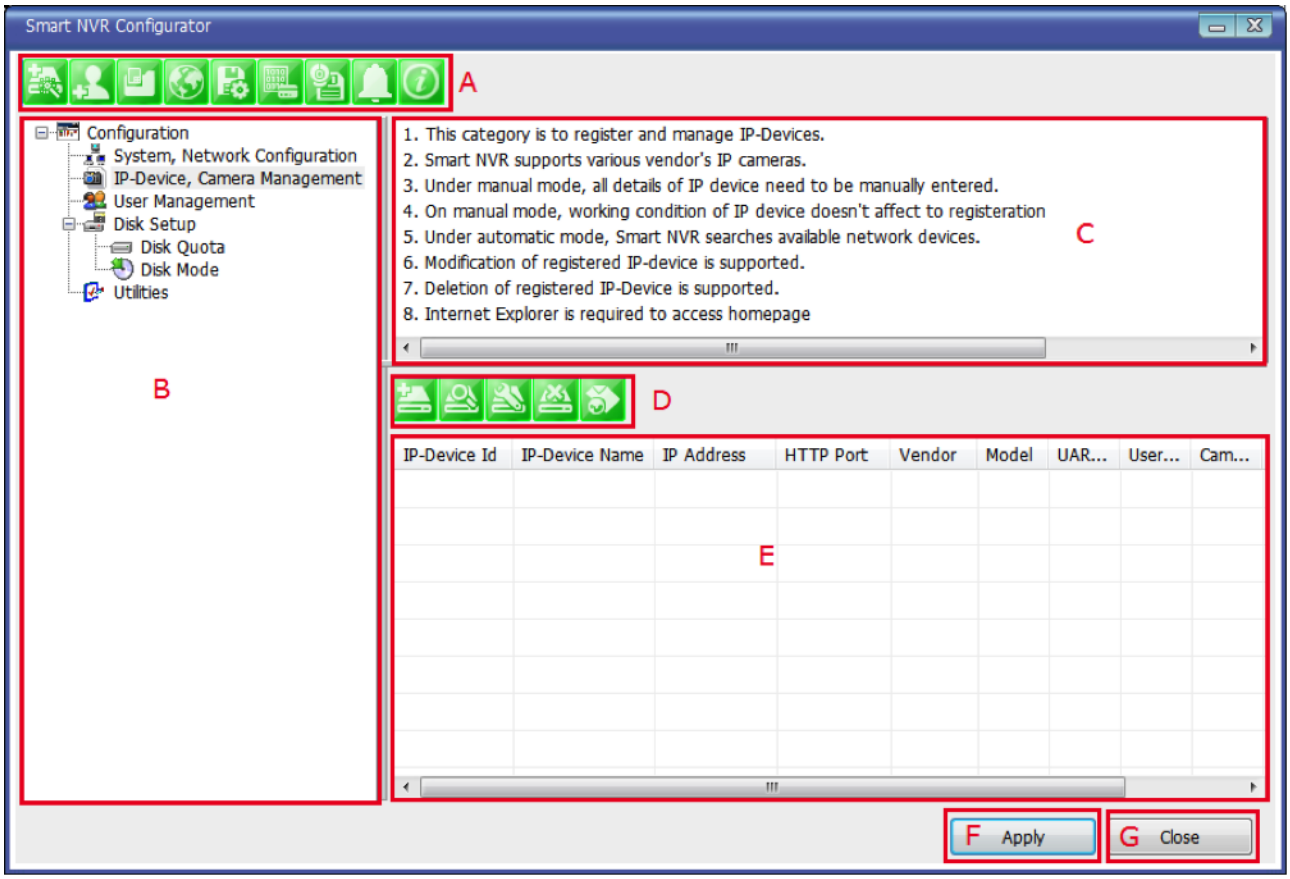
27. Quick Start Guide

EN-V-R is full-functioning Network Video Recorder software that runs on your PC. When started for the first time after EN-V-R is installed, there is no IP devices connected.

To add a camera to the EN-V-R you must **register** the camera first. Then EN-V-R knows what IP devices they are, how to connect to them, and how to use them. That way, you will be able to control EN-V-R for recording, live viewing, etc.

27.1. EN-V-R Configurator User Interface

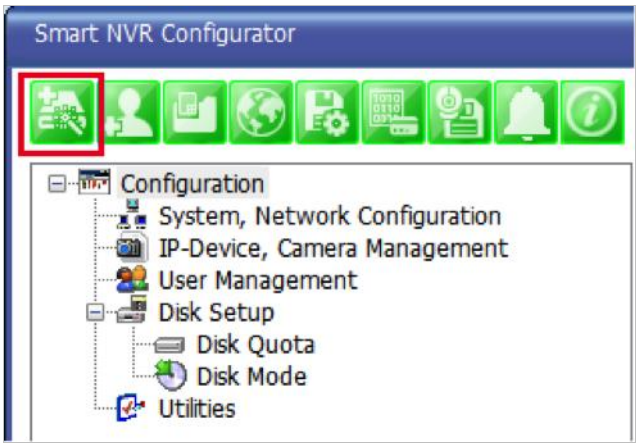
The following picture shows the main window of EN-V-R Configurator program.



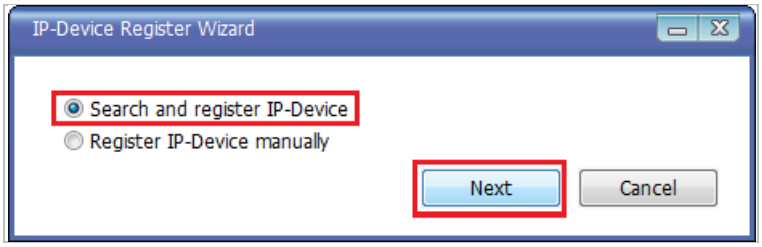
	Items	Descriptions
A	Main Toolbar	Frequently-used menu items are shown on this toolbar.
B	Configuration Menu tree	Configurable categories are shown as a menu tree style.
C	Configuration Menu Description	Descriptions and usages of the selected category are displayed.
D	Sub-Menu Toolbar	Menu items for the selected category are shown. (Note: This toolbar is displayed only when any top menu item is selected from the menu tree.)
E	Device List	IP cameras Information
F	Apply Button	Click this button to apply the changed values.
G	Close Button	Click this button to exit EN-V-R Configurator program.

27.2. Searching for IP Devices

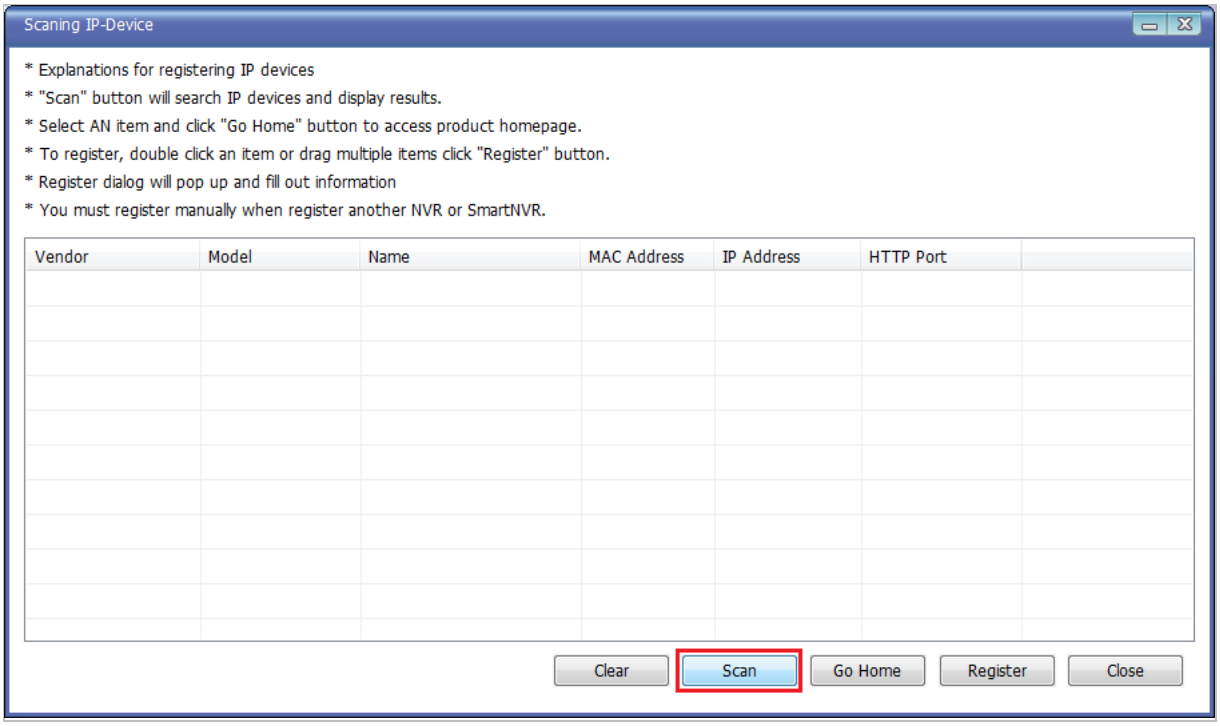
Click the first button on the Main Toolbar.



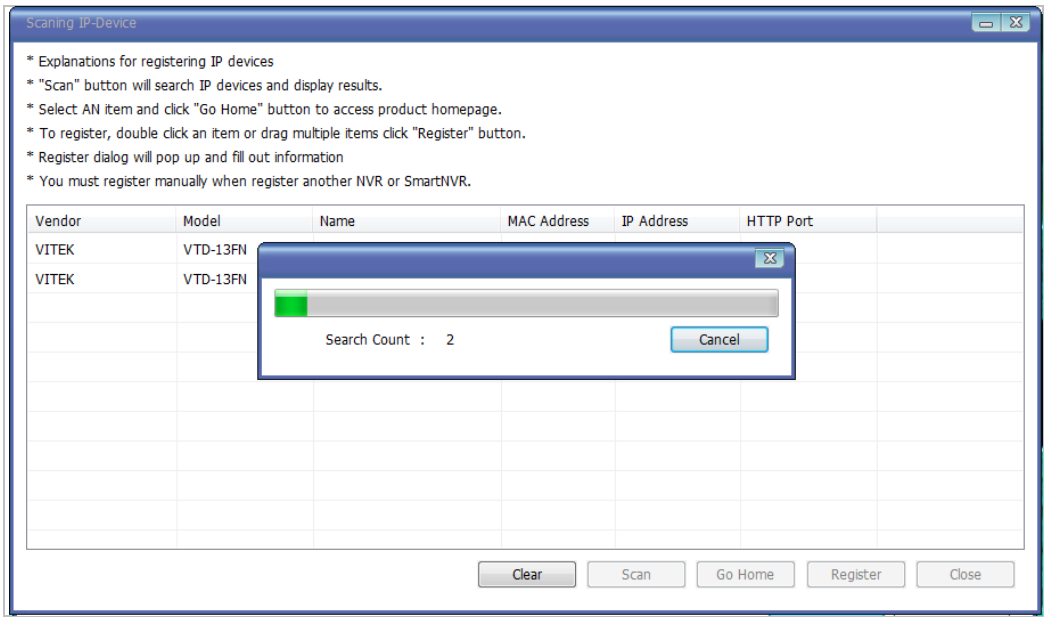
You are now given a choice to register the IP devices by "search and register or manually". To make it easy, choose **Search and register IP-Device** in this stage, and click **Next** button.



On the following window, click **Scan** button.

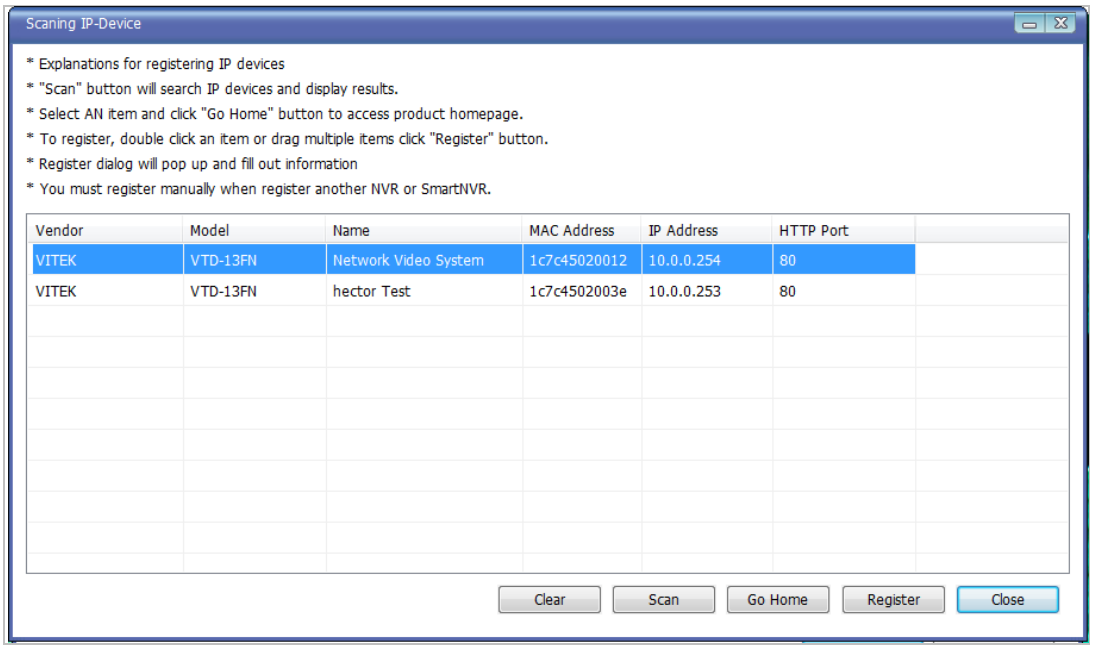

Scaning IP-Device
* Explanations for registering IP devices
* "Scan" button will search IP devices and display results.
* Select AN item and click "Go Home" button to access product homepage.
* To register, double click an item or drag multiple items click "Register" button.
* Register dialog will pop up and fill out information
* You must register manually when register another NVR or SmartNVR.
Vendor
Model
Name
MAC Address
IP Address
HTTP Port
Clear
Scan
Go Home
Register
Close

The searching for IP devices is started. As the detected IP devices are being listed. Wait until searching is finished. If you click **Cancel** button in the middle of searching, the EN-V-R will retain only the IP devices found until that moment.

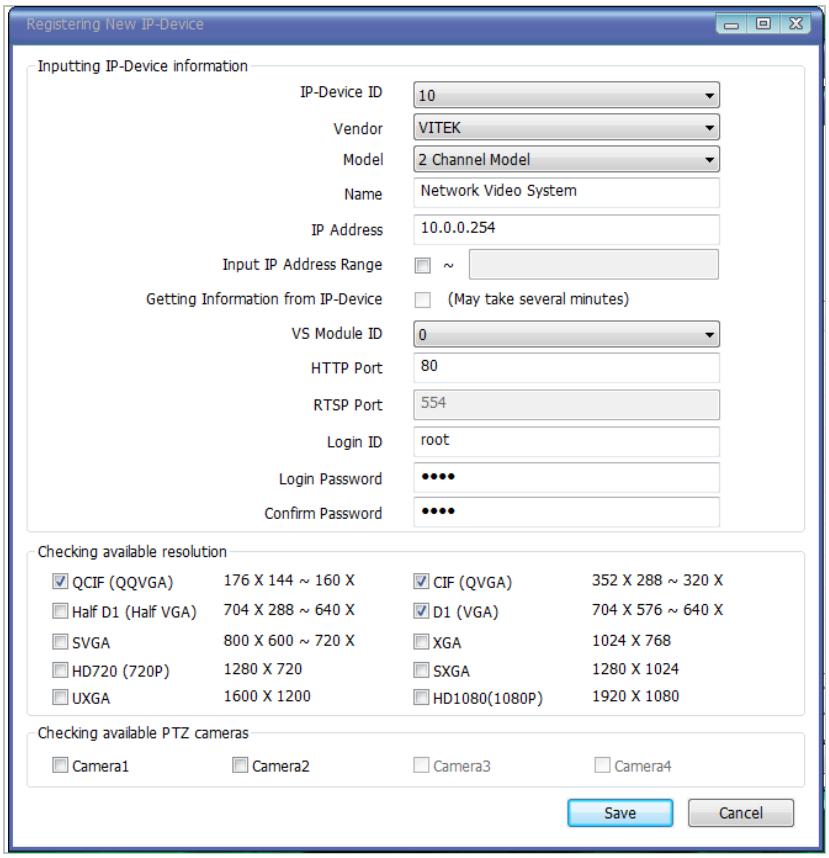


27.3. Registering IP Devices

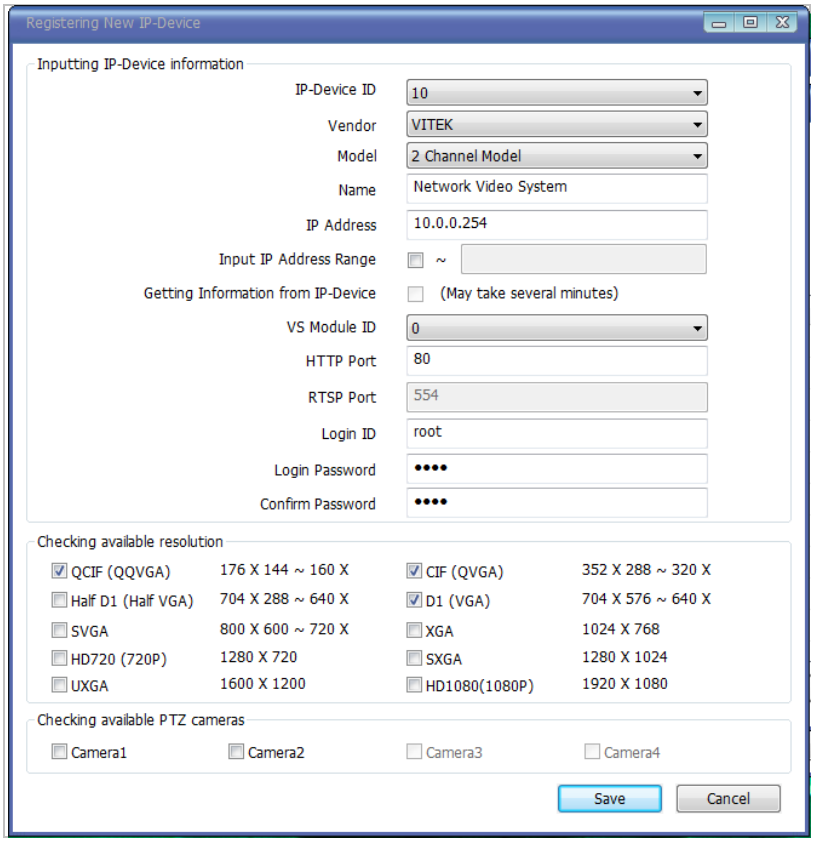
After scanning is finished, you have a list of IP devices found on your network. Next step is registering them. Double click the IP device you want to register or you may highlight it and then click **Register** button. In this example, the first one is chosen to register.



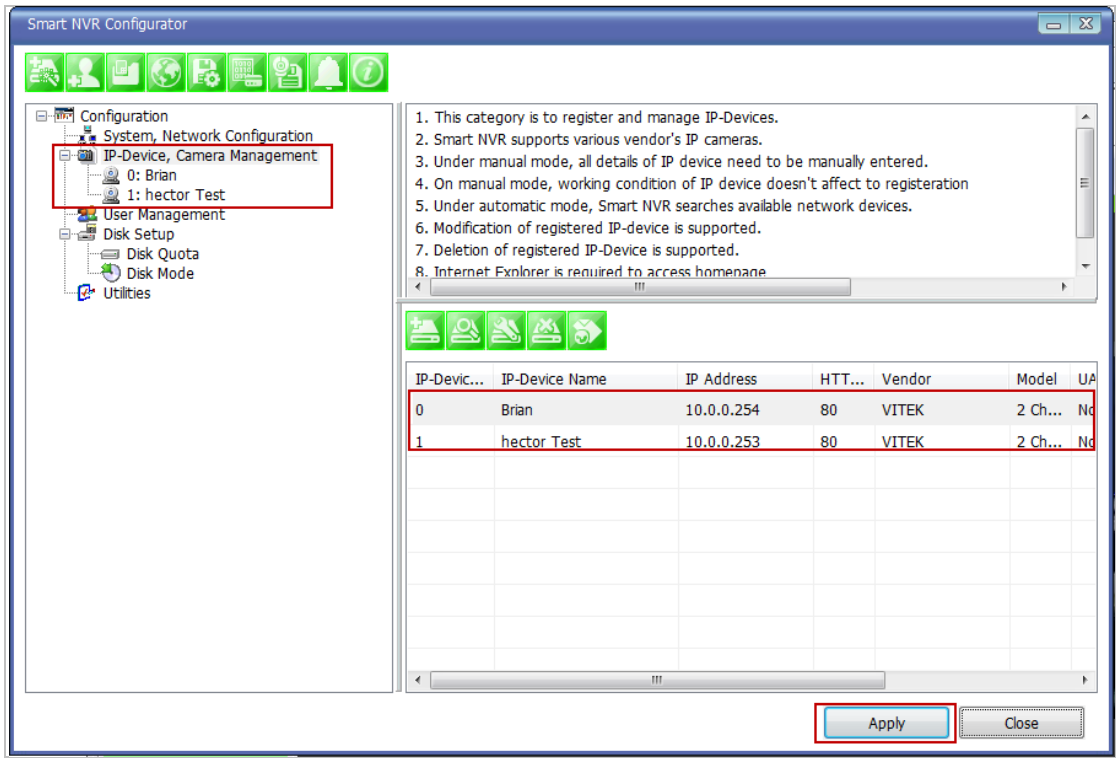
The next window shows up and it's for entering the network parameters and camera resolutions of the IP device you've chosen. You may need to enter the **Login ID** and **Password** here. Click **Save** to finish registering it.



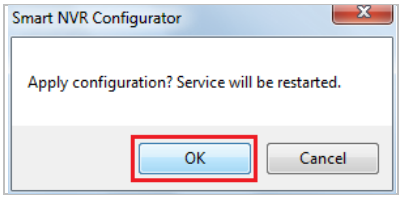
Click on Save after configuring IP device (camera)



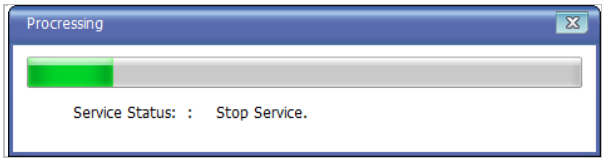
Click Apply after registering one or more IP devices (cameras).The image below represents the configurator with multiple IP devices registered.



After clicking **Apply**, the program will ask you to confirm it. Then click **OK**



EN-V-R service is being stopped momentarily, and then it will start running again.



27.4. Viewing Live Video

Once the network and cameras are set up, it is necessary to check if EN-V-R is functioning by viewing the live video from those devices.

To view the EN-V-R home page, click the Go NVR Home button on the main toolbar.

Below is an image of the EN-V-R home page.

Click **Live View** on top right part of the window to see the live video from registered IP devices (cameras)

If this is the first time you are using Vitek Live View feature, the web browser may ask you to allow installing of an ActiveX program. Click **Install** to continue.

This site might require the following ActiveX control: 'Smart Viewer' from 'VITEK IVP, inc.'. Click here to install...
Home | Live View | Player
Auto ActiveX Control Installation
If this auto process takes more than 30 seconds,
click the below button and install it manually.
Manual Download
Internet

In some cases there is no response from the web browser, you may need to install the ActiveX manually by clicking **Manual Download.**

When you see the following security warning, click **Install**.

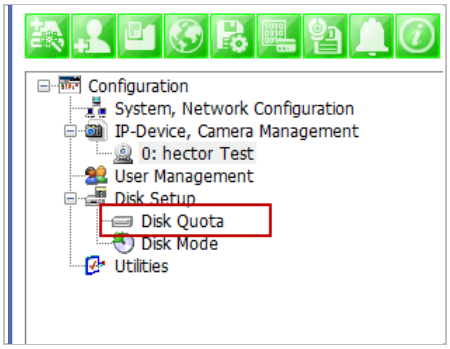
Internet Explorer - Security Warning
Do you want to install this software?
Name: SmartViewer.cab
Publisher: VITEK IVP, Inc.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

27.5. Recording Video

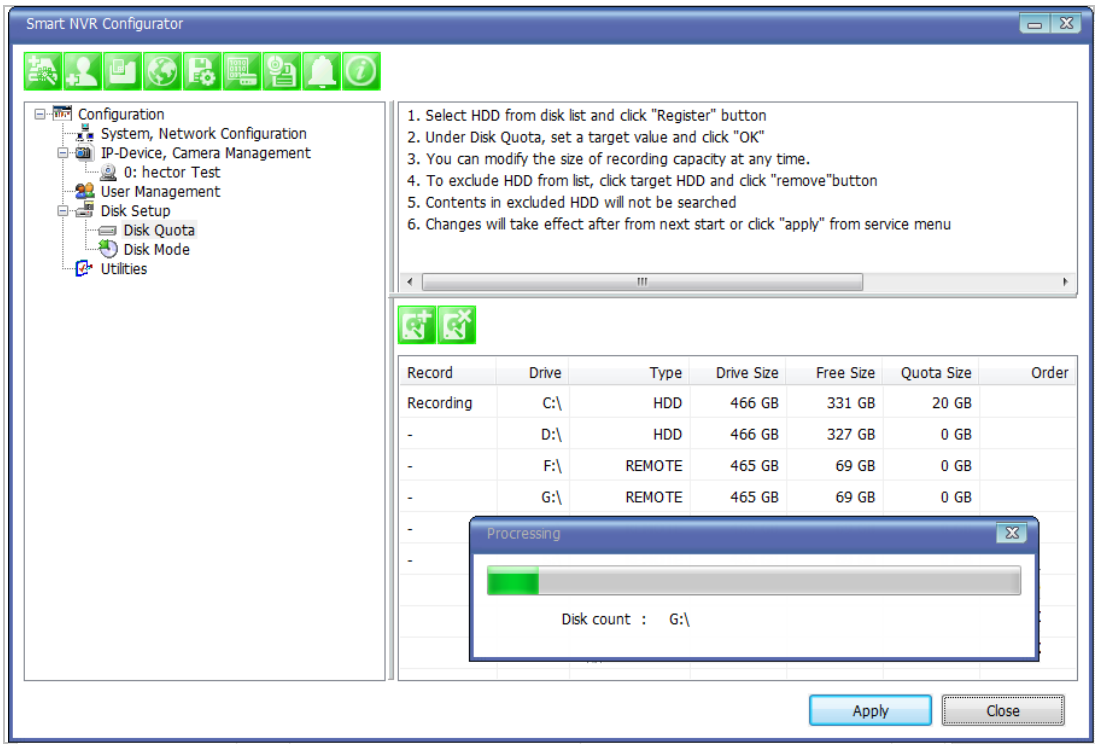
The essential feature of EN-V-R is recording the video from IP devices.

Before starting the recording, it is required to prepare the hard drive of your PC where EN-V-R program is running.

Click **Disk Quota** on the Menu tree.



The hard drive will be ready to start recording video after the progress window is done counting drives. It shows the target drive (s), total capacity, available size and quota for recording.



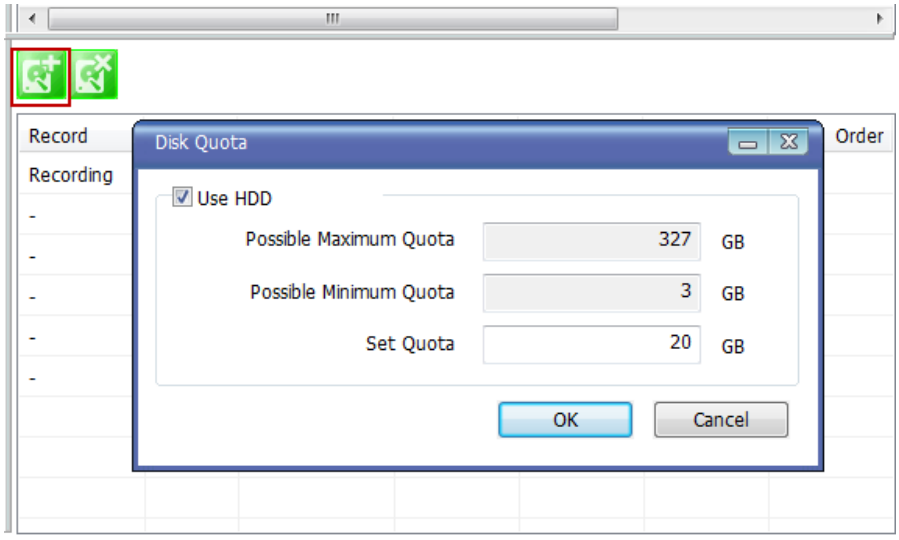
You are able to change the setting by highlighting the drive then clicking the first icon of the sub-menu Toolbar.

Use HDD (to use this HDD for recording)

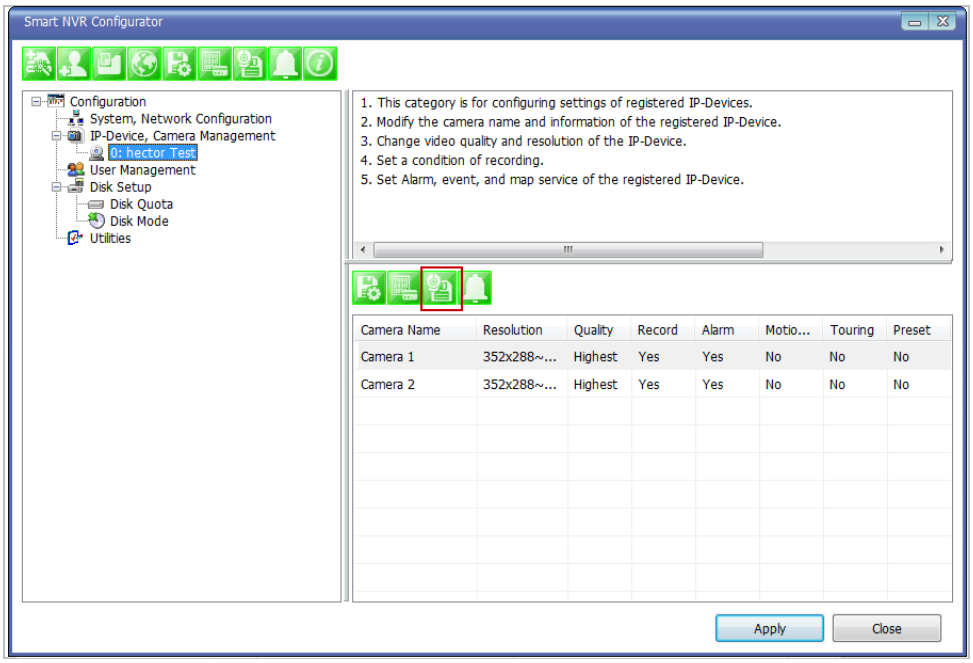
Possible Maximum Quota (the available of free space on your HDD)

Possible Minimum Quota (the minimum amount required)

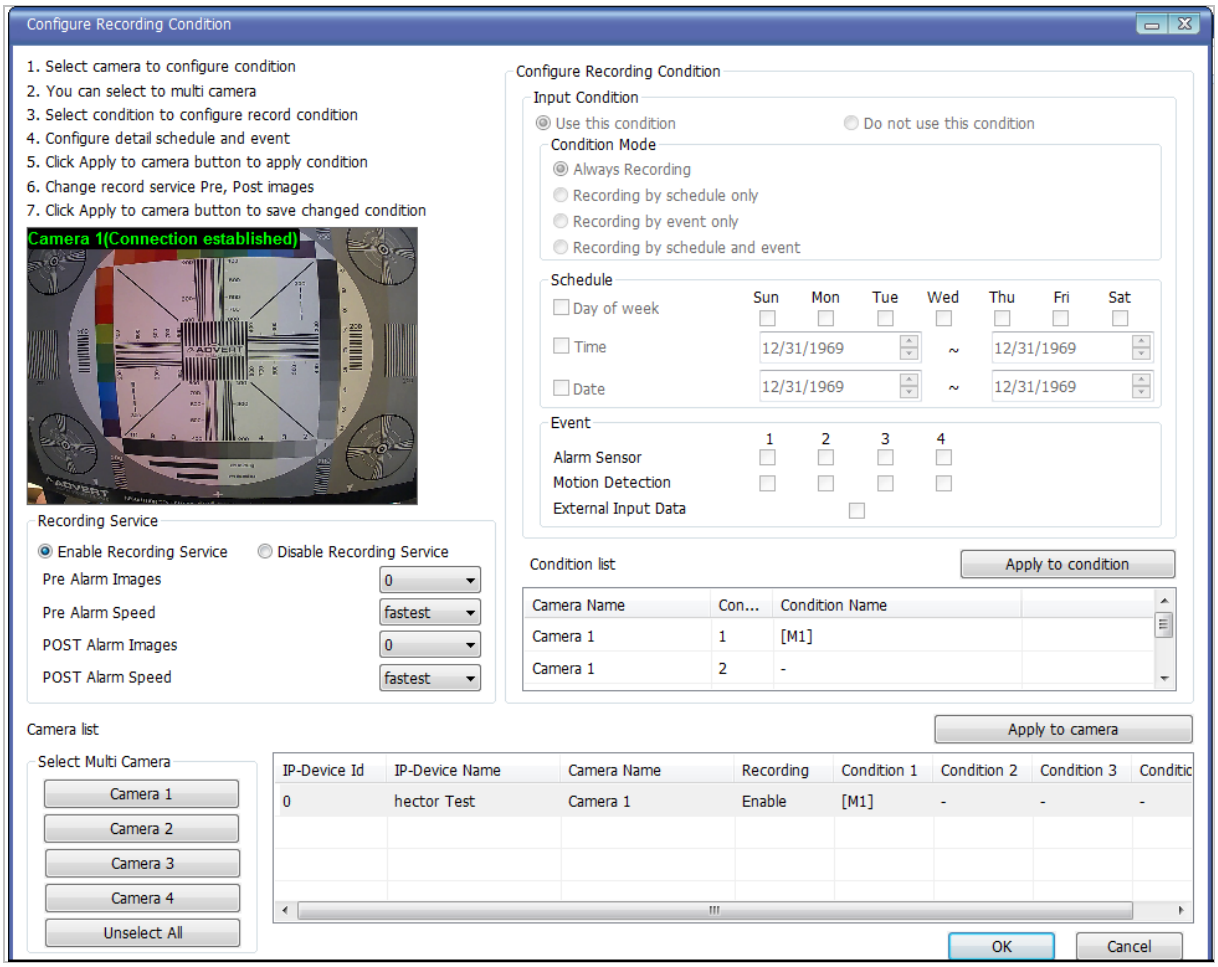
Set Quota (desired amount of HDD to be use for recording)



To set up the recording feature, select an IP device from the Menu tree on the left pane. The device information will be shown on the right pane. Click the button for recording configuration on the sub-menu Toolbar as shown below.



Now you will see **Configure Recording Condition** window as below.



The recording feature is already enabled and recording conditions are configured in default settings. In the example shown above, you can see that Camera 1 of Device 0 will record video only when motion is detected. Click **OK** to use this Recording Conditioned.

To change recording condition high light camera 1 under condition list (A)

Select the type of Recording under Condition Mode (B)

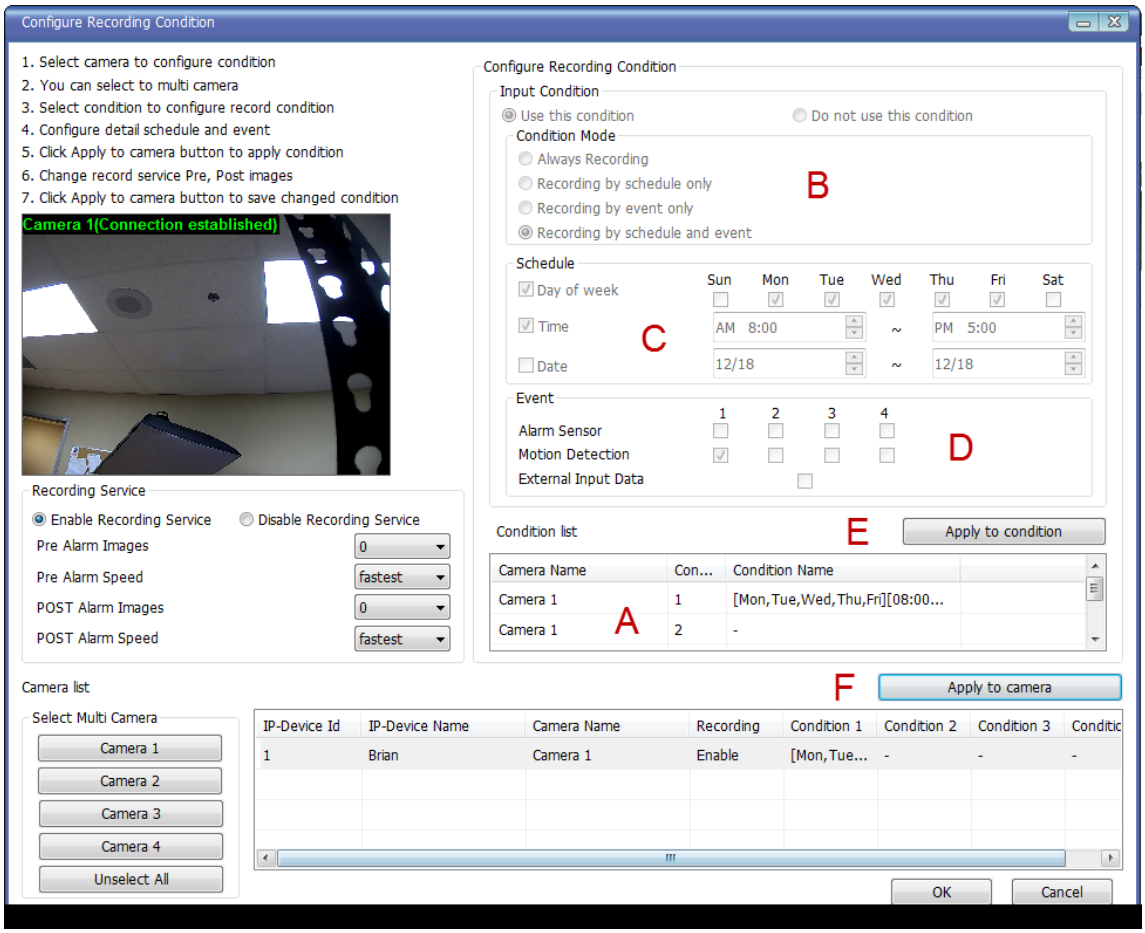
If schedule recording is enabled, the schedule section will be available to configure (C)

If Event is selected the event section will be available to configure (D)

After conditions are selected click **Apply to condition** (E)

After apply to condition click **Apply to camera** (F)

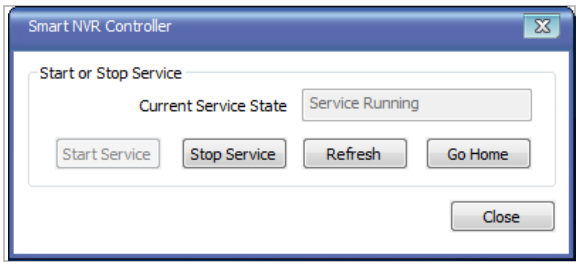
Click **OK** when done.



Now that the configuration is done, you need to start the EN-V-R service program. Select Start > All Programs >Vitek>smart NVR>Smart NVR controller**.**

You will find the EN-V-R icon on the system tray, which is located right, bottom part of the Windows desktop.

Move the cursor over the icon, and right click. The following pop-up menu will show. You can open EN-V-R Configurator or EN-V-R Controller program from this menu, or you can go to the Home page of the EN-V-R program for live view or playback.



You can find out from this window that the service is running at that moment. If not, click **Start Service** button to run. Once EN-V-R service is started, the video sent from the configured camera will be recorded according to the recording condition.

28. ENVI Smart Player

28.1. Introduction

Smart Player is and ActiveX program for Internet Explorer Web browser, which enables users to search and play back recorded video in Network Video Servers and other devices with built-in recording capabilities. The Searching and playback of video is refined by condition, schedule, and event.

Smart Player can be run in SmartNVR network video software for PC and network cameras equipped with SD card as well as standalone NVR (Network Video Recorder) devices.

28.2. Key Features

- Transforming recorded video into AVI, FJP&IDX, formats
- Supports Printing of video
- Playing Audio from recorded video
- Group Searching from recorded video
- Supports Full Screen Mode

28.3. System Requirement for PC

For best quality and performance, your computer needs to meet the minimum requirement.

- OS: Microsoft Windows XP Pro, Windows 7 Pro, Windows 8 PC
- CPU: Intel Pentium 4, 2 GHz (Dual-Core or faster is recommended)
- System RAM: 2GB
- Video Card: 256MB Ram, 1024x768 Resolution
- 100 Mbps Network Adaptor

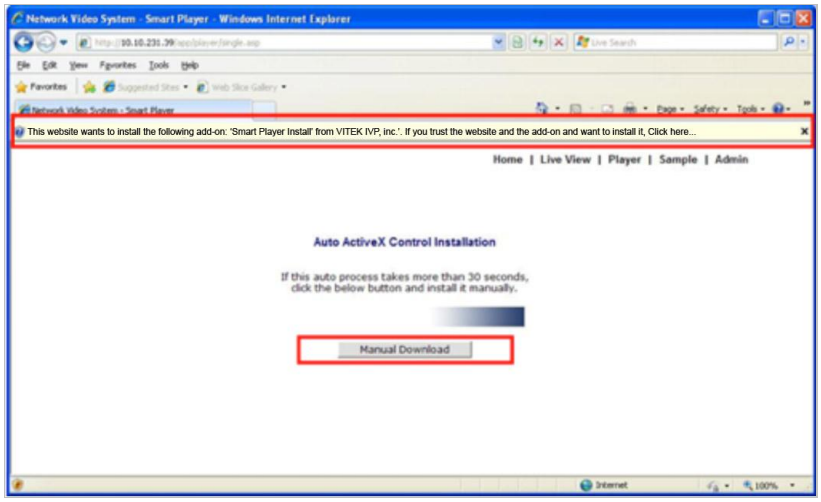
29. Installing and Uninstalling

29.1. Installing Smart Player

Connect to the Vitek Camera / Server / NVR on Internet Explorer, and click **Player** on the main page.

Network Video System
Home | Live View | Player
VITEK
INDUSTRIAL VIDEO PRODUCTS, INC.
An Eye on Innovation.
Homepage ver 4.07-1300 for Network Video System

If you're using Windows XP Service Pack 2 or later, it may asked you to install ActiveX click the massage bar than click on the Install ActiveX control…

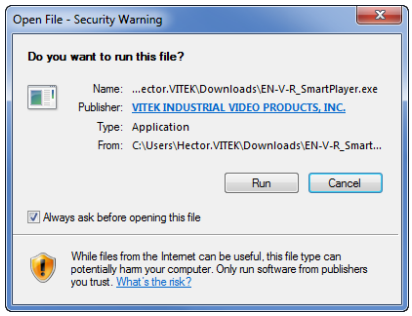

Network Video System - Smart Player - Windows Internet Explorer
This website wants to install the following add-on: 'Smart Player Install' from VITEK IVP, inc.'. If you trust the website and the add-on and want to install it, Click here...
Home | Live View | Player | Sample | Admin
Auto ActiveX Control Installation
If this auto process takes more than 30 seconds, click the below button and install it manually.
Manual Download

After the installation is successfully completed, **Smart Player** window will be displayed.

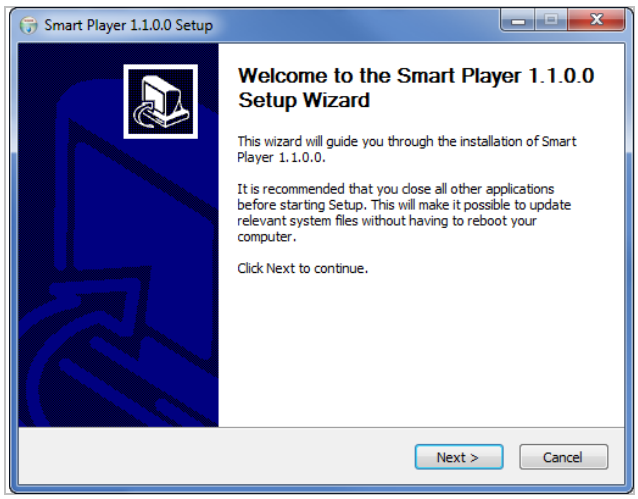
29.1.1. Manual Installation

When an Internet connection is not available or having some difficulties, you can manually download and install the Smart Player program file prior to setup, visit http://www.vitekcctv.com/Downloads.asp. You may also install from the provided CD. Execute the downloaded file, and you will see the Smart Player Setup Wizard window.

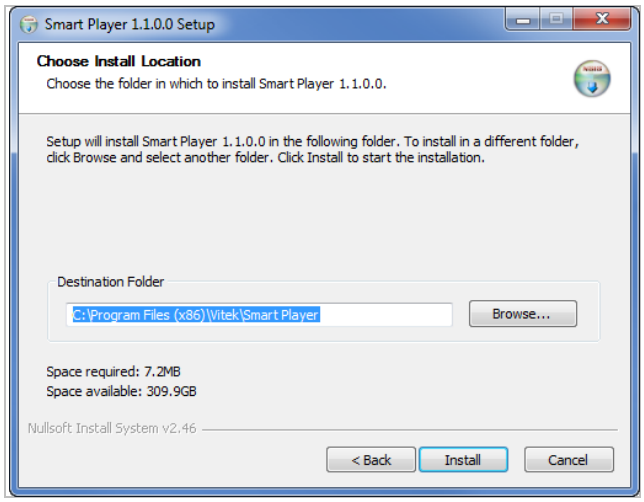
Click **Run** to start installing.


Open File - Security Warning
Do you want to run this file?
Name: ...ector.VITEK\Downloads\EN-V-R_SmartPlayer.exe
Publisher: VITEK INDUSTRIAL VIDEO PRODUCTS, INC.
Type: Application
From: C:\Users\Hector.VITEK\Downloads\EN-V-R_Smart...
Run
Cancel
Always ask before opening this file
While files from the Internet can be useful, this file type can potentially harm your computer. Only run software from publishers you trust. What's the risk?

The following window will appear. Click **Next**.


Smart Player 1.1.0.0 Setup
Welcome to the Smart Player 1.1.0.0 Setup Wizard
This wizard will guide you through the installation of Smart Player 1.1.0.0.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

The following window will be displayed. Click **Install**


Smart Player 1.1.0.0 Setup
Choose Install Location
Choose the folder in which to install Smart Player 1.1.0.0.
Setup will install Smart Player 1.1.0.0 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files (x86)\Vitek\Smart Player
Browse...
Space required: 7.2MB
Space available: 309.9GB
Nullsoft Install System v2.46
< Back
Install
Cancel

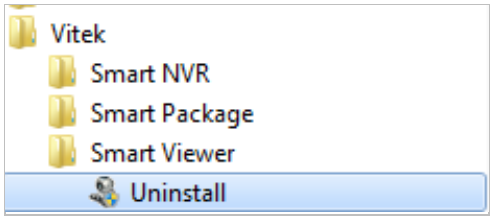
After installation is successfully completed, the following window will be displayed. Click **Finish**.

Smart Player 1.0.1.2 Setup
Completing the Smart Player 1.1.0.0 Setup Wizard
Smar Player 1.1.0.0. has been installed on your computer.
Click Finish to close this wizard.
< Back
Finish
Cancel

29.2. Uninstalling Smart Player

Before uninstalling, close all the Internet Explorer windows.

29.2.1. Uninstalling on Program Menu

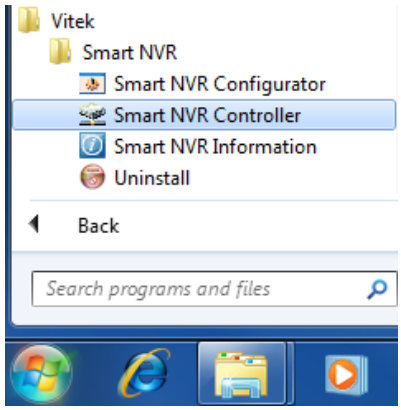


Click **Uninstall** and the following window will be shown. Click the **Yes** button.

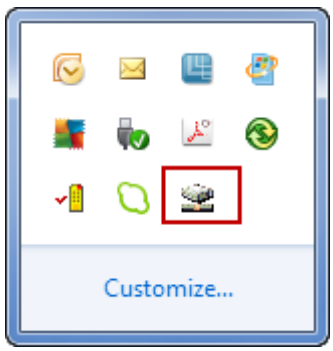
User Account Control
Do you want to allow the following program from an unknown publisher to make changes to this computer?
Program name: uninst.exe
Publisher: Unknown
File origin: Hard drive on this computer
Show details
Yes
No
Change when these notifications appear

Live View & Play Back

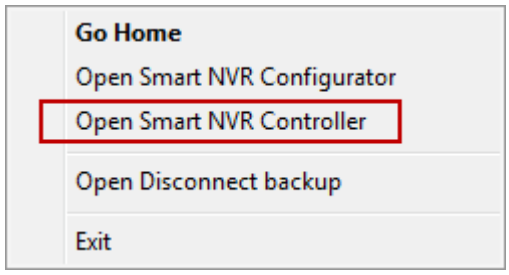
To live view and play back your cameras, go to **Start** menu, **All Programs, Vitek Folder**, Click on **Smart NVR Controller,** as shown below.



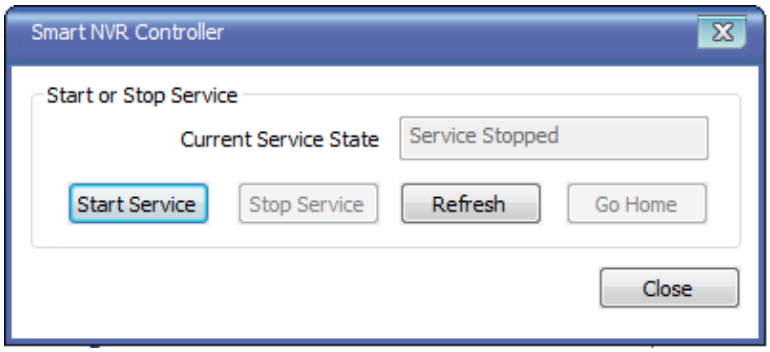
Look for icon on right side of taskbar as shown below (windows XP and windows 8 might show it different). Right click icon.



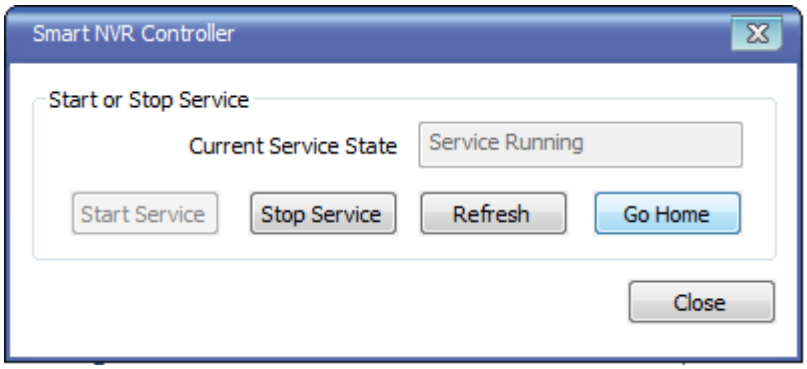
The following window will display. Click on **Open Smart NVR Controller**.



Click on **Start Service** to run the program.

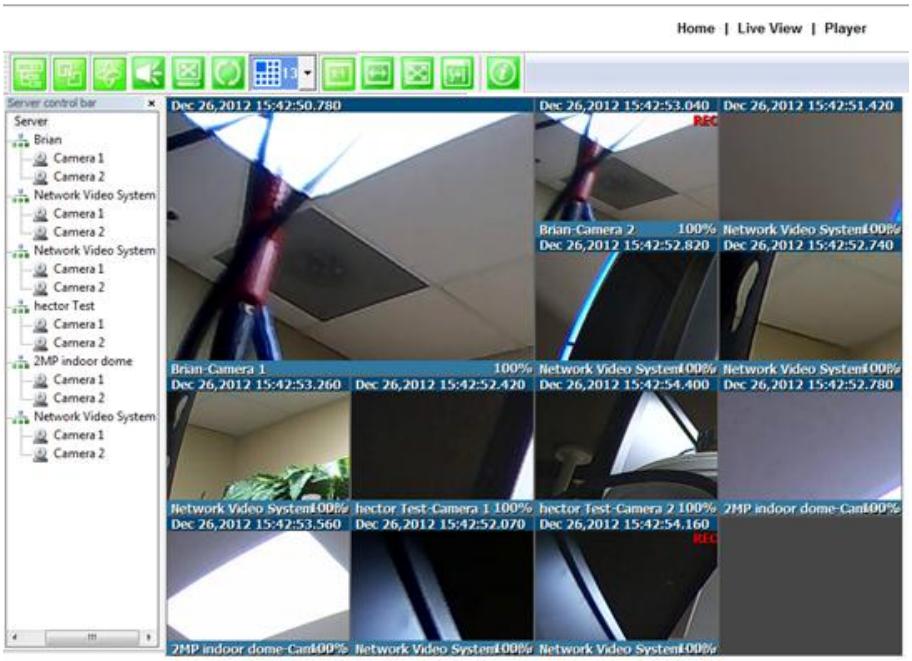


Click on **Go Home** to view Smart Player Home Page



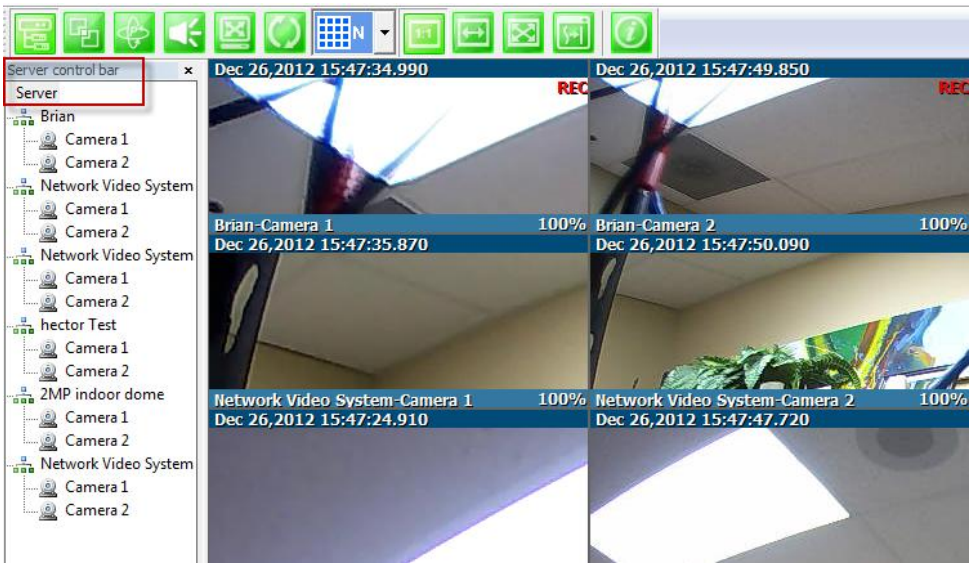
Click on **Live View**

The following screen will be display were you can configure your live view.



Server Control Bar

Allows you to view cameras / servers that are registered in the system. Toggle On/Off

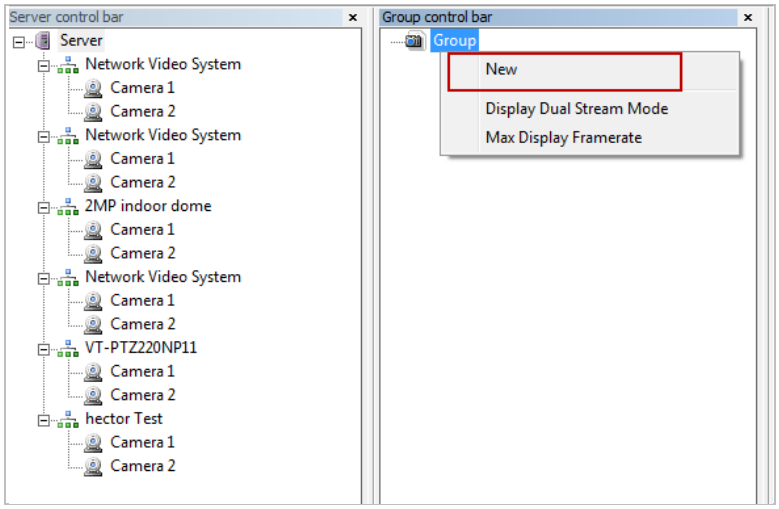


Group Control Bar

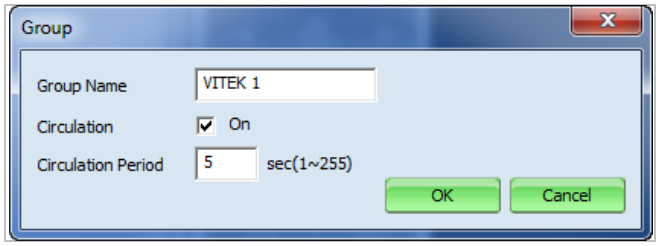
In order to view video, cameras must be assigned to a group, in this section you create groups with cameras you want to view.

Create Group

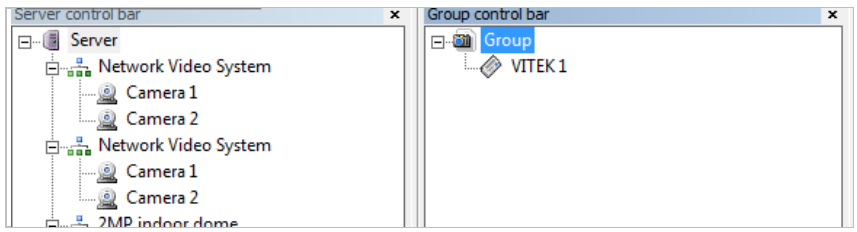
In order to create a group in **Group Control Bar**, right click on **Group**, another window will appear then select **New**.



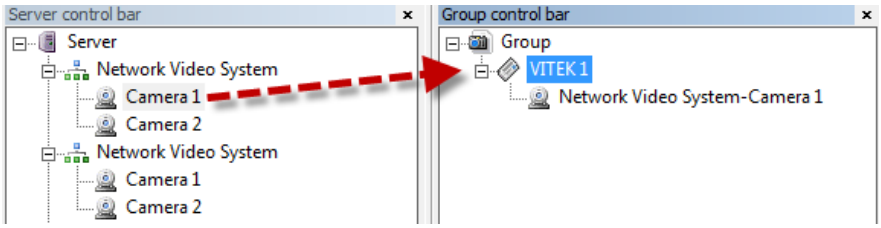
The following window will be displayed. Type in the group name, check "Circulation" to allow sequencing, input dwell time for "Circulation" and click **OK**.



A new group with the assigned name will be created as shown below.

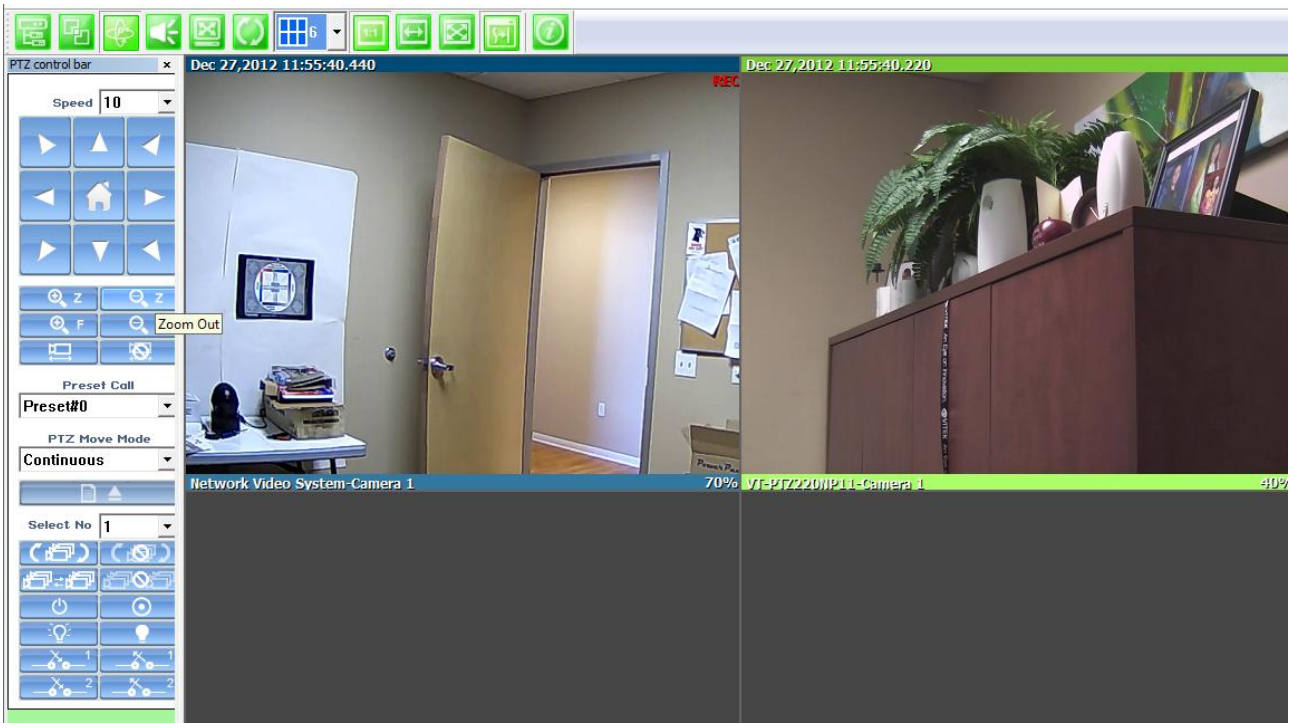


To add cameras to the new group, drag from server control bar and drop on newly created group. You can create multiple groups and add multiple cameras in each group.



PTZ control Bar

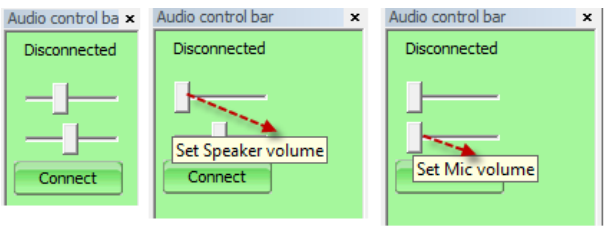
In this section you will be able to control PTZ's connected to the system.



Audio Control Bar

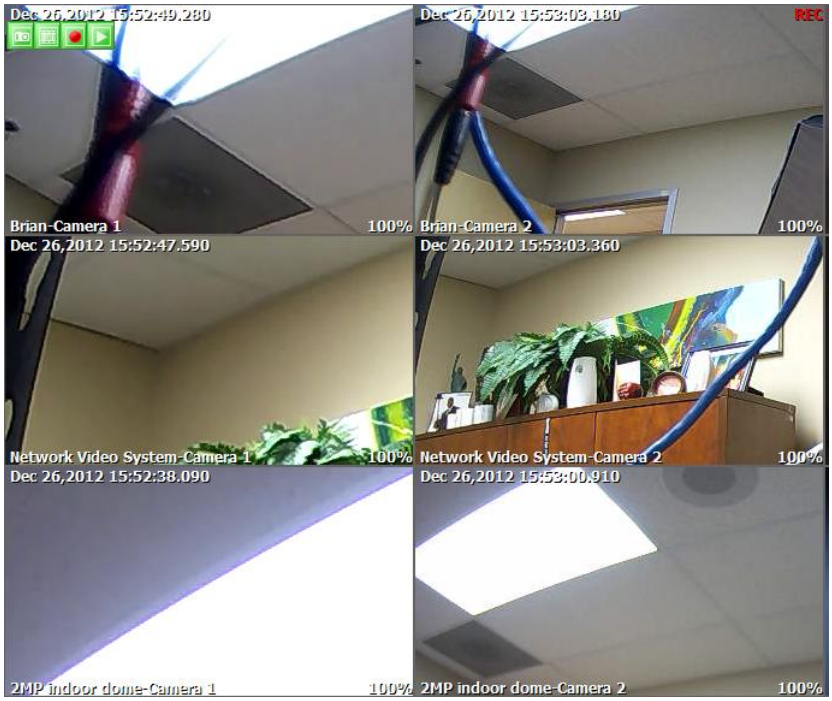
Controls Speaker and Mic volume.

When audio is available click on **Connect** and adjust speaker and mic levels, when done click **Disconnect**.



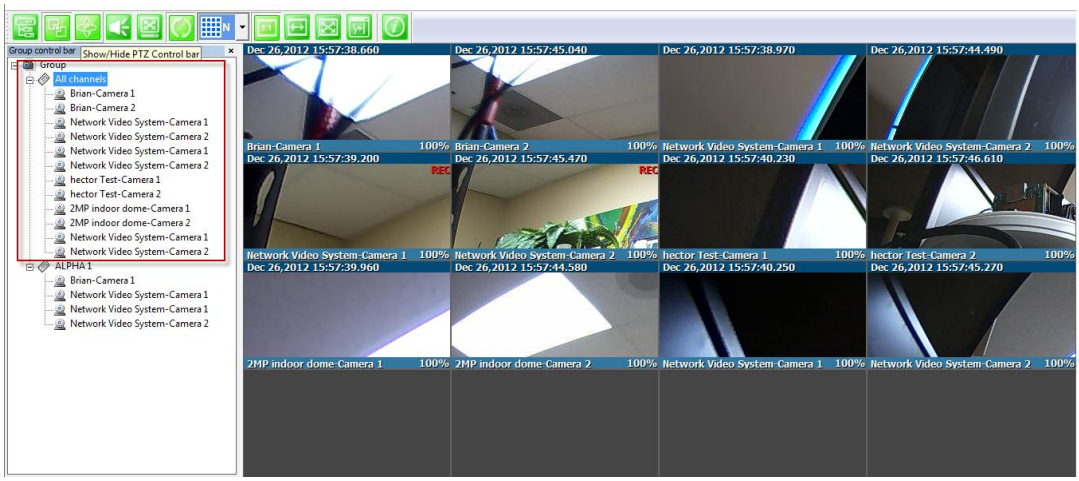
Full/Normal Screen

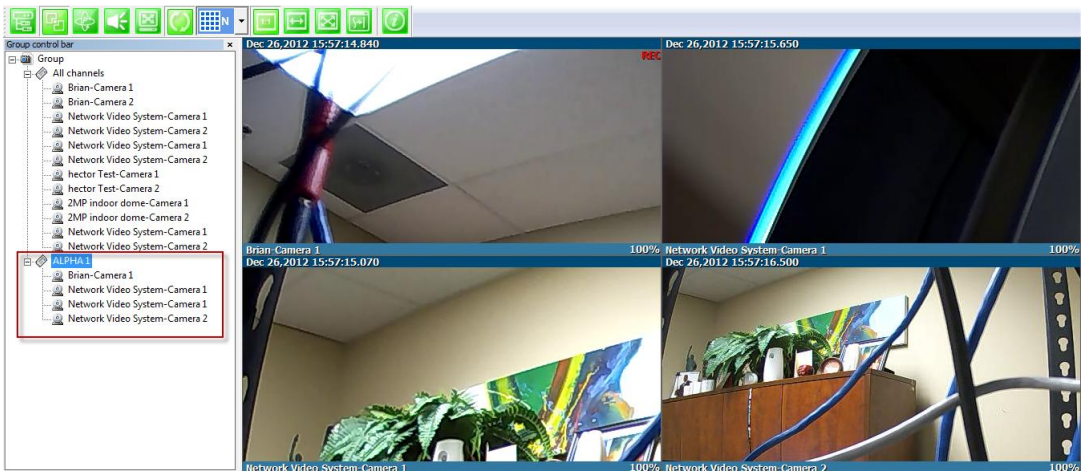
Select full screen as seen below, to return to normal press **Esc** on your keyboard.



Group Circulation

Start sequencing between groups.





Layout settings

You can change the screen layout between 1,2,4, etc.

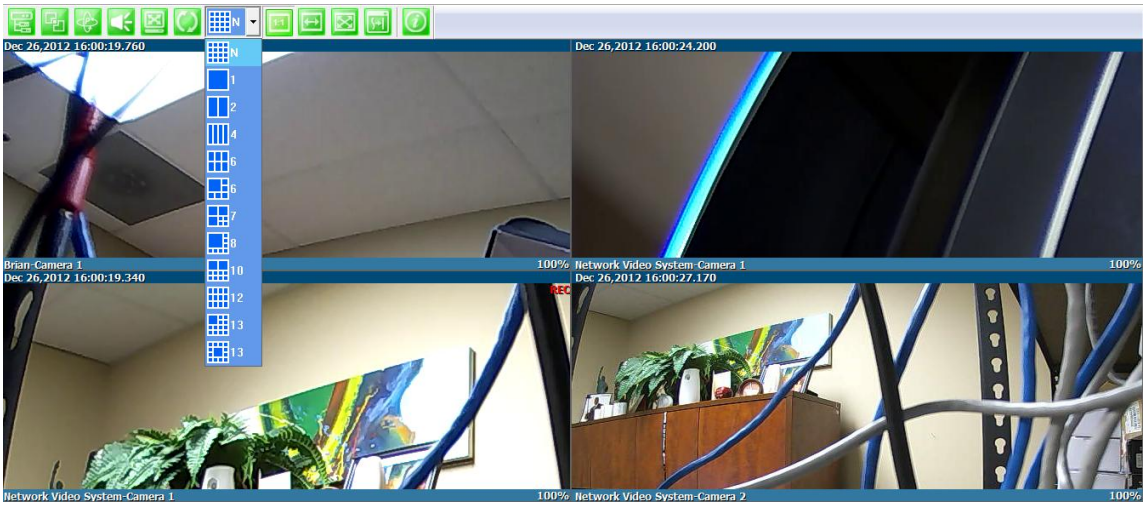
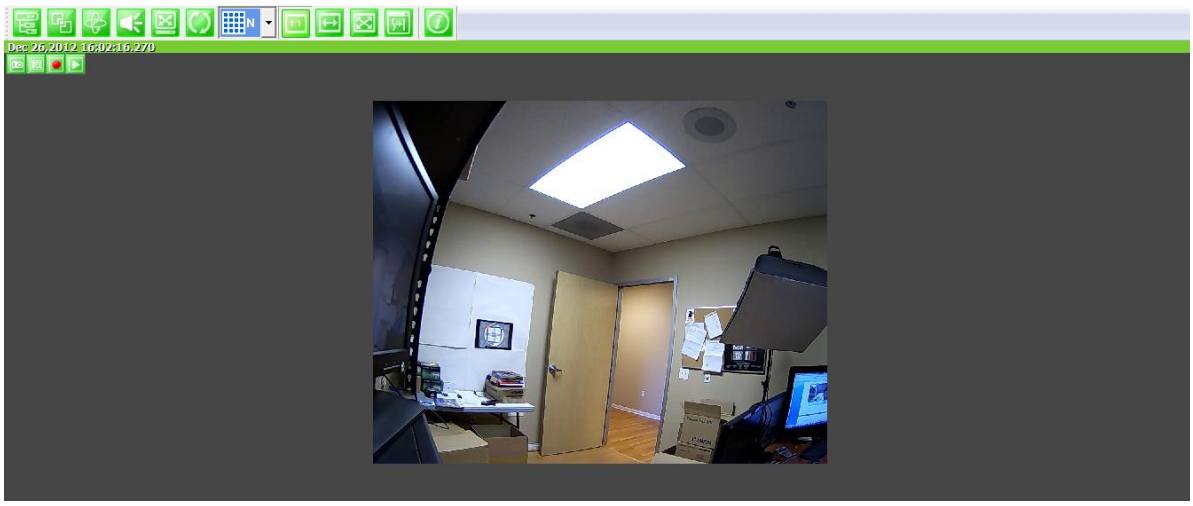


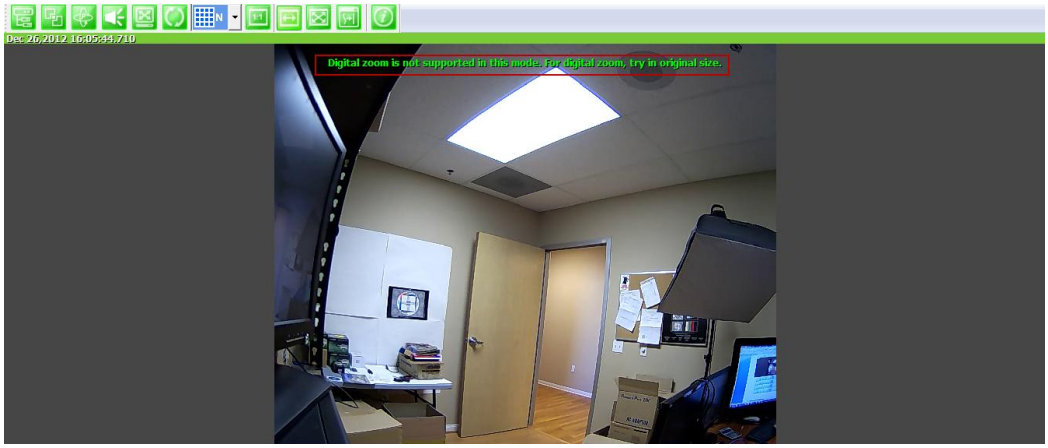
Image in Original Size

This allows for digital zoom.

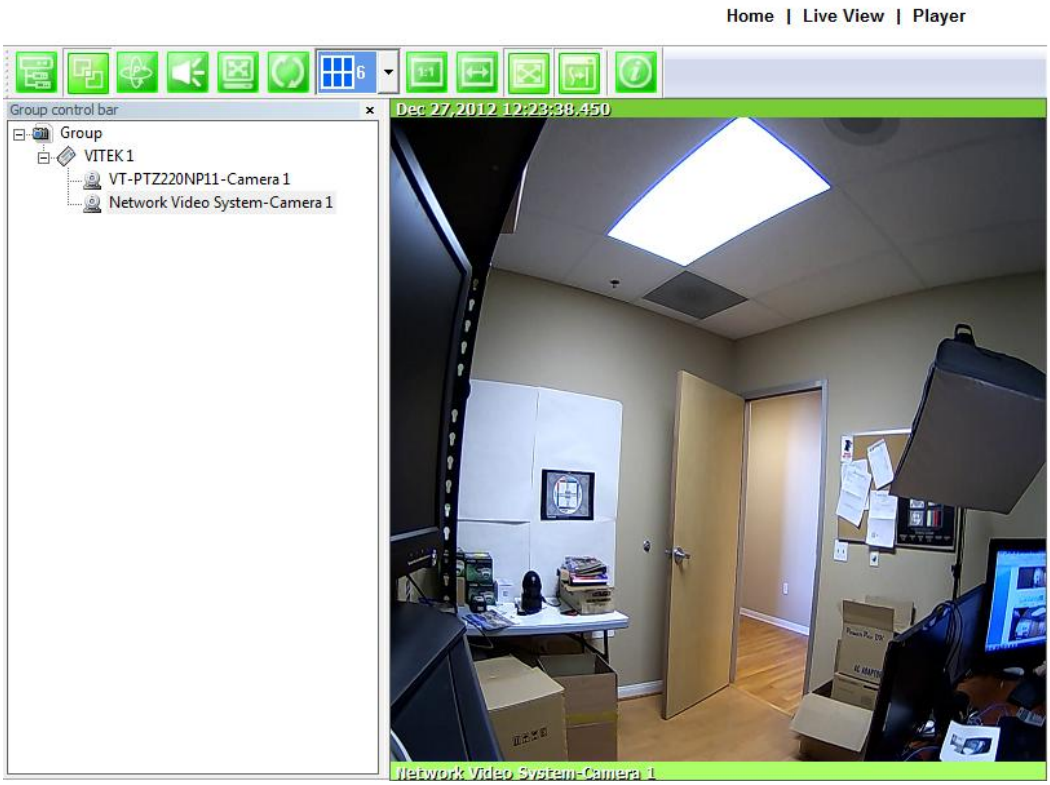


Draw Image by Maintaining Aspect Ratio

Maintains the aspect ratio of the camera



Draw Image by Filling the Screen

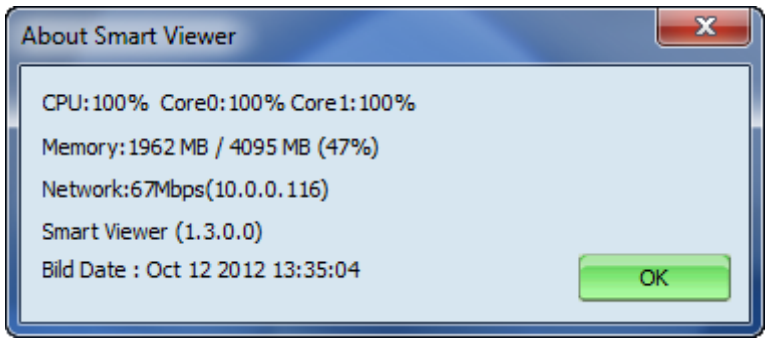


Enhanced Draw Mode On/Off.

Enhance image for a better reproduction.

About Smart Viewer

You can see the status of the Smart Viewer

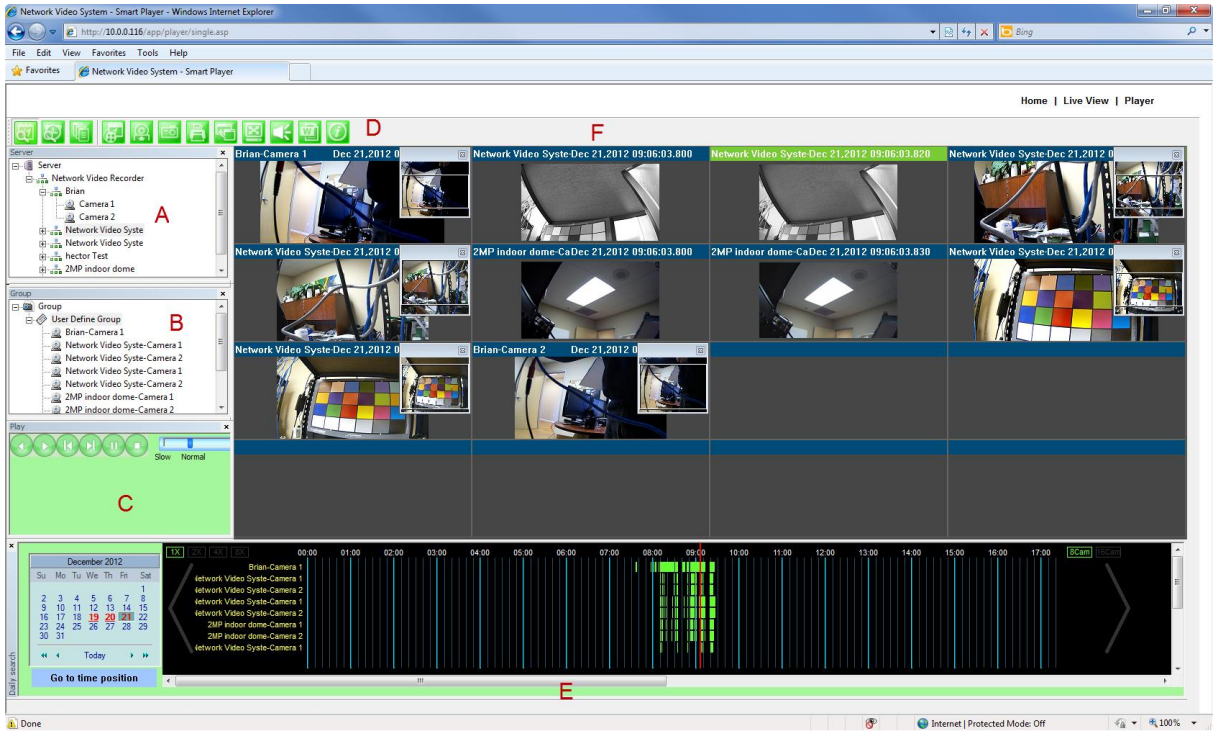


30. Configuring & Viewing Player

From the Home Screen click on **Player**

Network Video System
Home | Live View | Player
VITEK
INDUSTRIAL VIDEO PRODUCTS, INC.
An Eye on Innovation.
Homepage ver 4.07-1300 for Network Video System

30.1. Main Window View



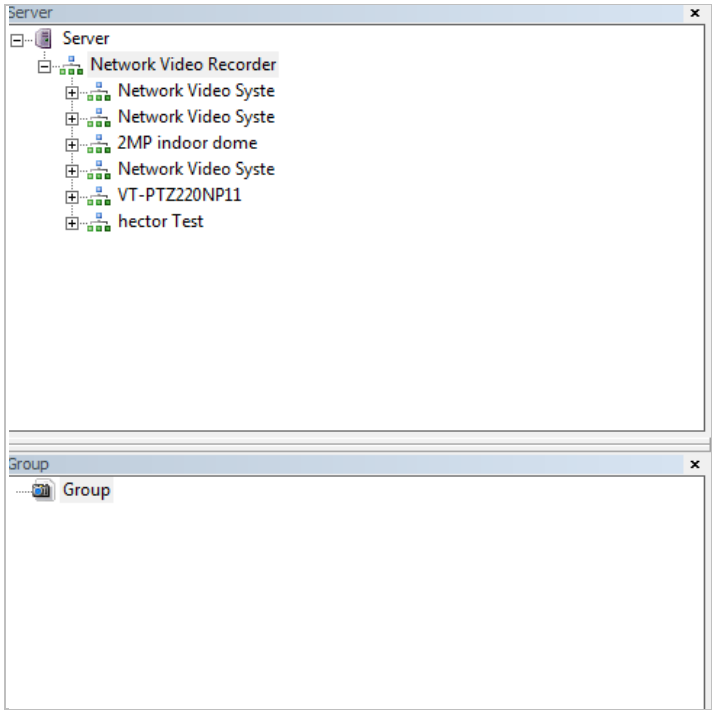
Note: The appearance of Smart Player window may vary depending on version and type of Vitek device you're using. This user's manual is based on general display screen.

Server Control Bar A	Allows you to view cameras / servers that are registered in the system.

Group Control Bar B	You can compose a new group by dragging & dropping servers, modules, and cameras into a group. Grouping provides search function of recorded video from cameras.
Playback Control Bar C	Users can use this bar for functions such as forward/reverse play, previous frame, next frame, pause, stop, playback speed.
Control Tool Bar D	Users can change search mode between calendar, condition, and data. It also provides additional features such as backup and snapshot.
Time Line Control Bar E	Search condition (calendar, condition, and data) can be refined in this bar.
Display screen F	This screen shows multiple numbers of recorded videos.

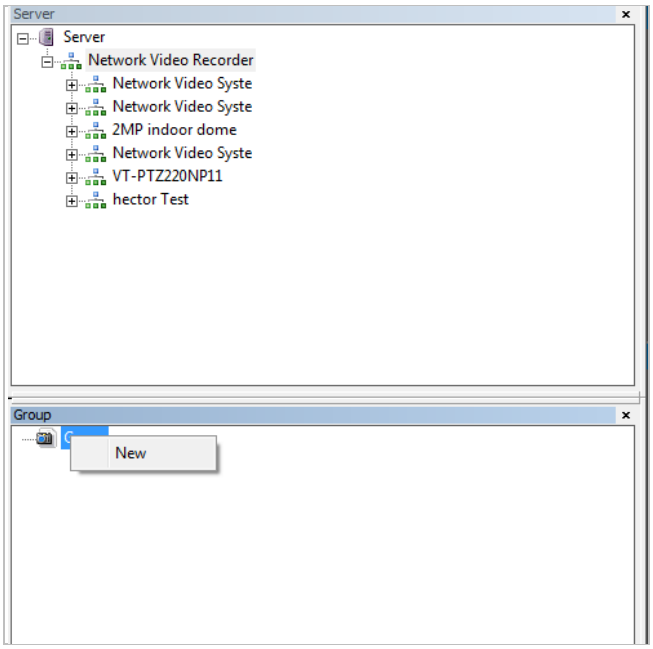
30.2. Connecting to NVR Player

In order to playback video, cameras must be assigned to a Group, in this section you create groups with cameras you want to playback. Playback directly from cameras with SD card installed will have "Group" automatically created and the camera assigned to that "Group"

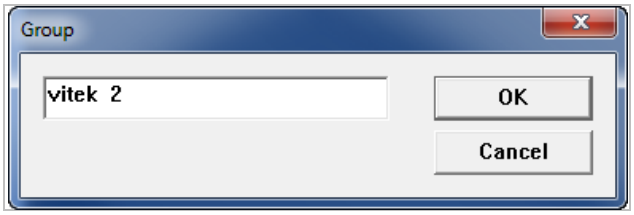


30.3. Creating a Group

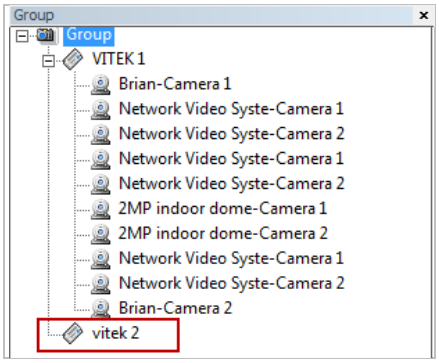
In order to generate a group in Group Control Bar, right click on **Group**, another window will appear then select **New**.



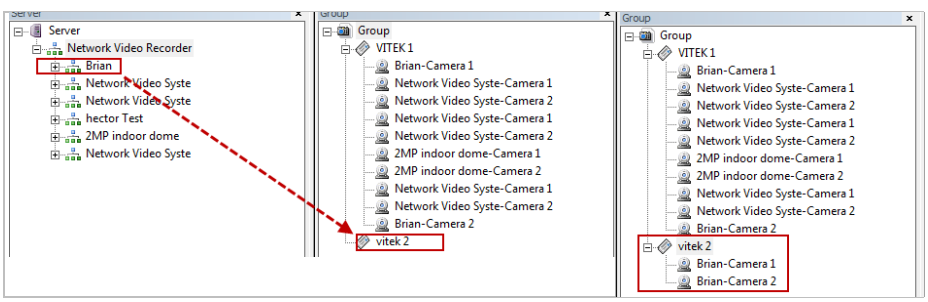
The following window will be displayed. Type in the group name and click **OK**.



A new group with the assigned name will be created as shown below.



To add a camera to the new group, drag and drop from the server tree to the newly created group.



31. Searching Video

Make sure you have recorded video on the calendar (recorded video shows in red).

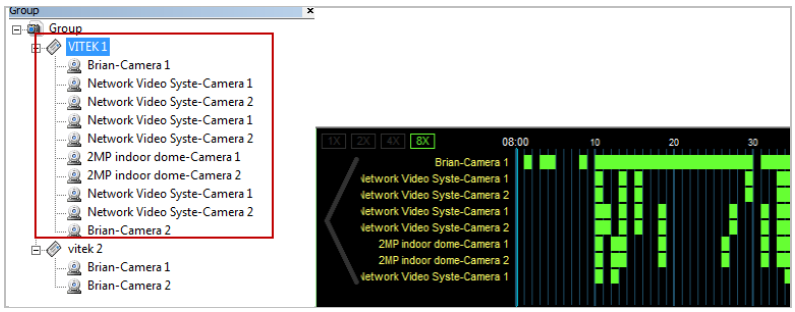
There are three choices in searching recorded video - Day Search, Condition Search, and Data Search.

Make sure that Camera / Server Connection and Creating Group have been performed before you search recorded video.

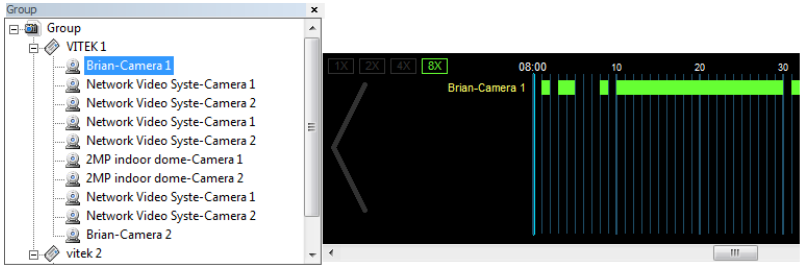
31.1. Searching Video

To search and playback video, Smart Player requires one or more groups to exist. If a search is executed on the basis of a selected group, a search will be performed on all the cameras in that group. If a search is executed on the basis of a single camera, the search will be performed only from that camera.

For example, if you select a group and start searching; the search from that group will be displayed

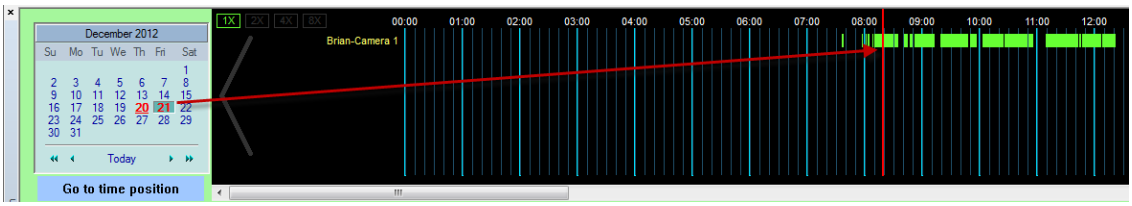


If you only select "Brian-Camera 1", the searching will be performed only on the video from that.



31.2. Daily Search

Select date from calendar than select time from the time bar.

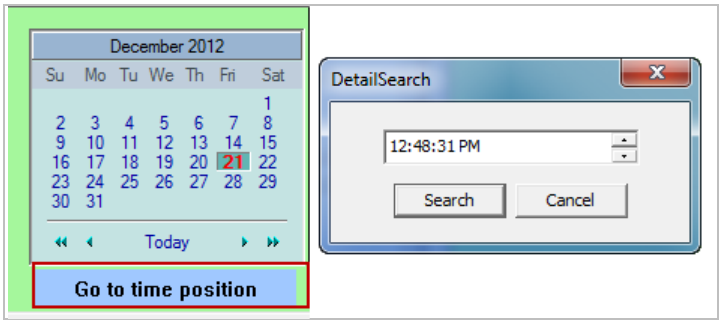


31.2.1. Search Mode

By clicking a date in red on the calendar, the time frame recorded is shown.

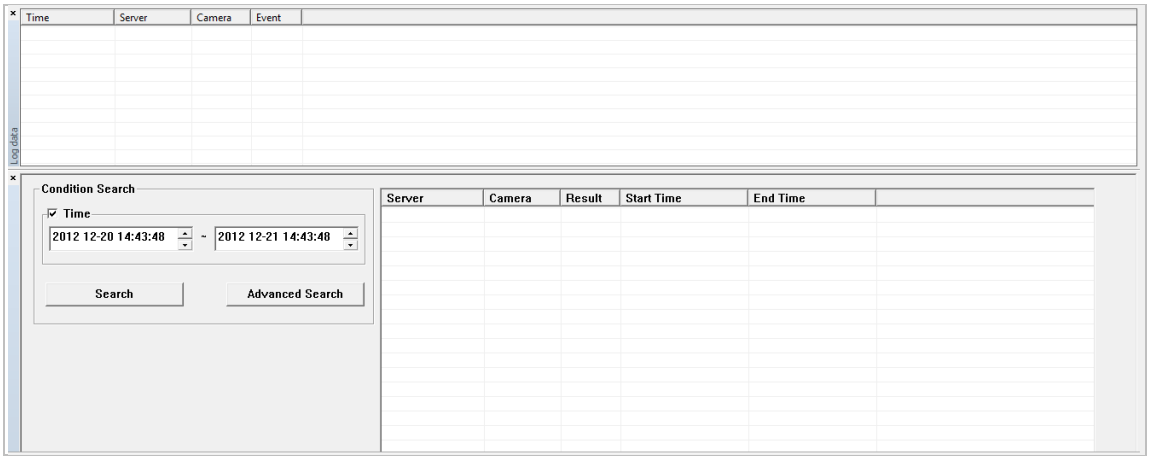
31.2.2. GO to Time Position

To go to specific time click on "Go to time position" than input time and click search.



31.3. Condition Search Mode

In this mode, you can search for video on the basis of combination of 3 different conditions, which are Time, Motion, and Sensor. Initially only Time condition is available for searching, and you need to enter **Advance Search** mode to utilize Motion and Sensor state if necessary.



Search

Select time and date from beginning to end of search criteria. Then click **Search**.

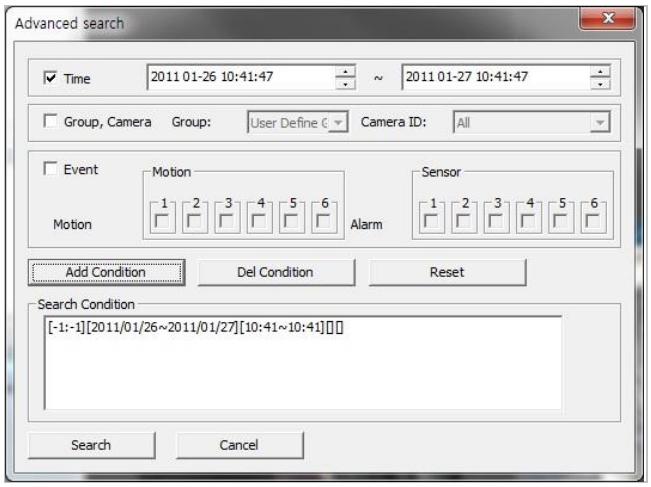
The following window will be displayed to inform you of the search progress. If any results are found, the

video will start playing back right after searching is completed.

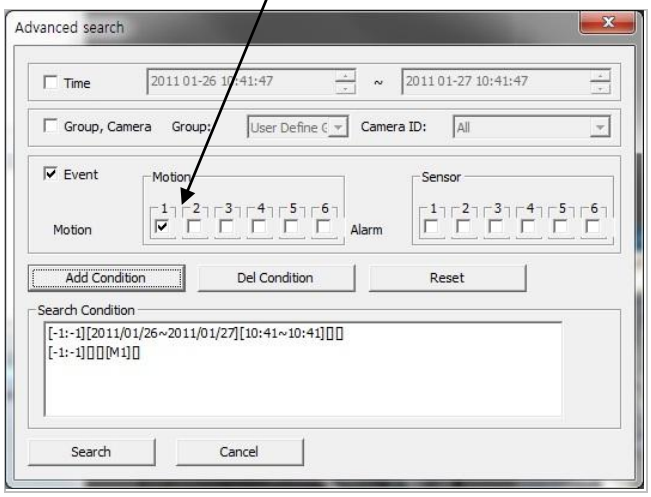
31.3.1. Advanced Search Mode

In Advance Search Mode you can select which conditions to search from (Time, Event, etc)

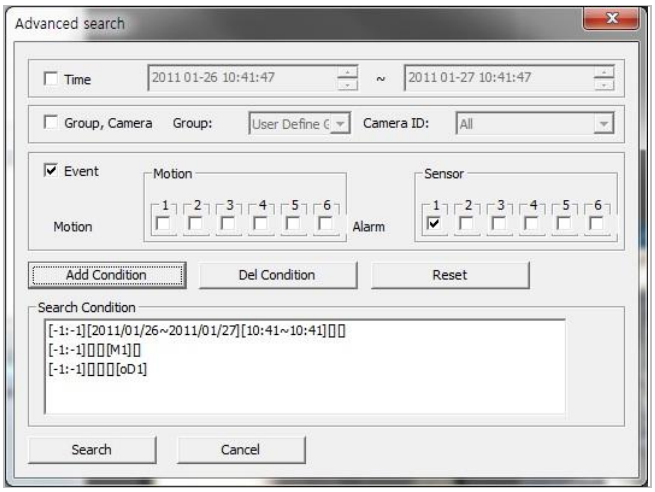
First, select **Time** checkbox, and choose the desired time frame (Start date and time ~ End date and time), and then click **Add Condition** button to add to **Search Condition.**



Now select **Event** checkbox, and choose **Camera 1** from **Motion**, and then click **Add Condition** button to add to **Search Condition.**

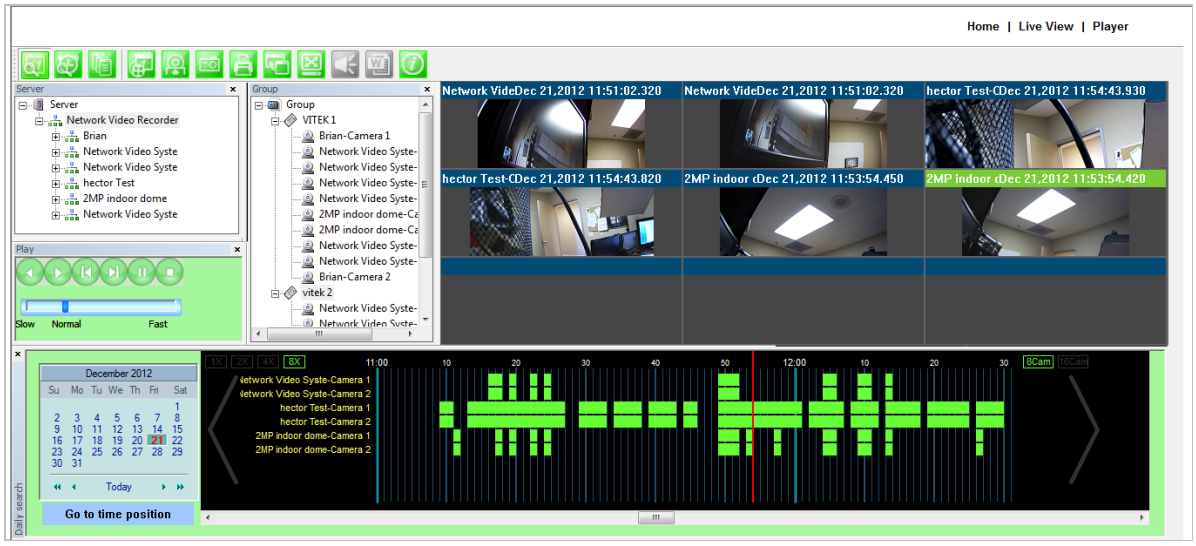


Next, select **Event** checkbox, choose Sensor 1, and then click **Add Condition** button to add the Sensor condition to **Search Condition.**

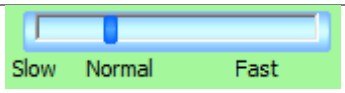
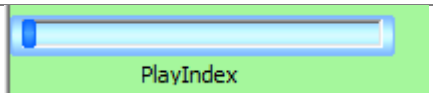


Now that all the conditions have been configured, click **Search** button to start searching. Any video data which meets at least one of the conditions in **Search Condition** list will be shown as the results.

32. Video Playback Controls



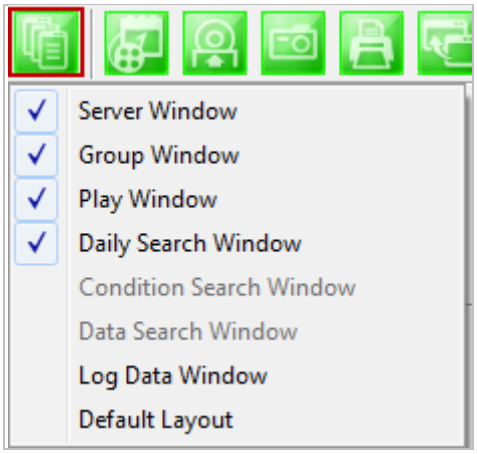
	Play Reverse
	Play Forward
	Pause
	Stop

	Back to Previous Frame
	Go to Next Frame
	Playback Speed Control
	Player Path Control (only for condition search mode)

33. Extra Features

33.1. Window Control

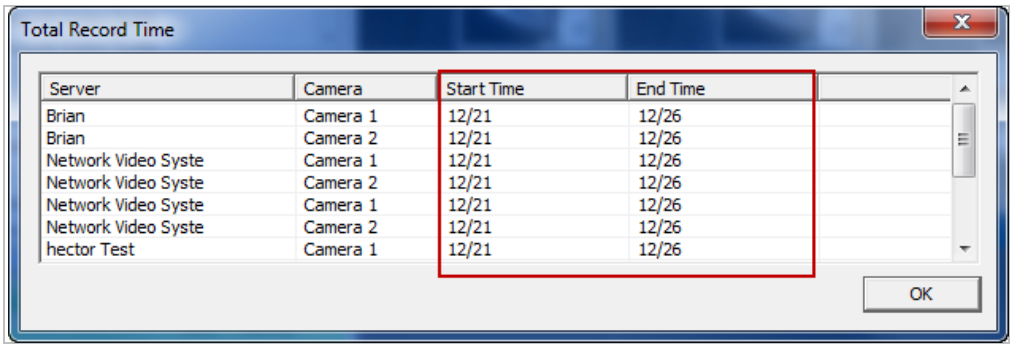
Users can open or close control windows.



33.2. Recording Period

You can view the starting and ending date of a recorded channel.

Record time is displayed as shown below.

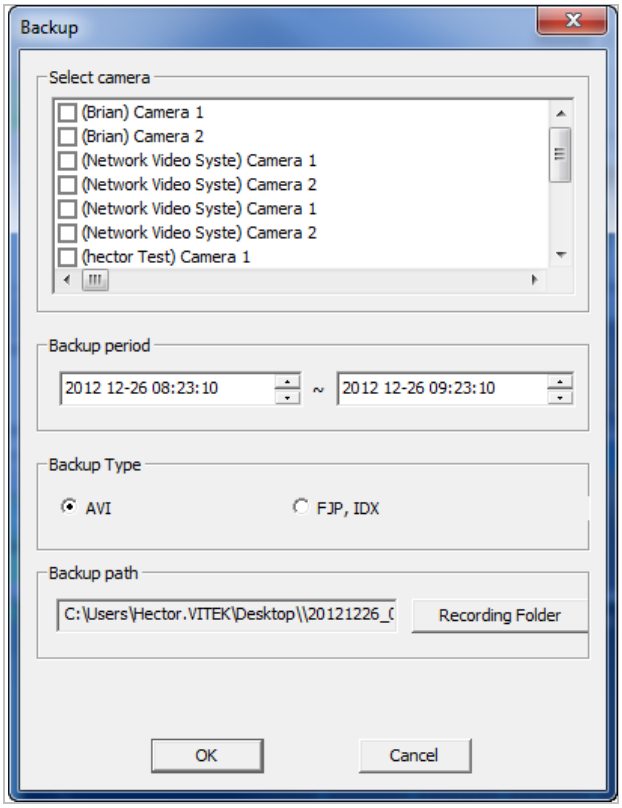


33.3. Backup

There are two backup formats IDX and AVI.

.IDX	Default video file format used by Vitek
.AVI	Video file format supported by Microsoft Windows

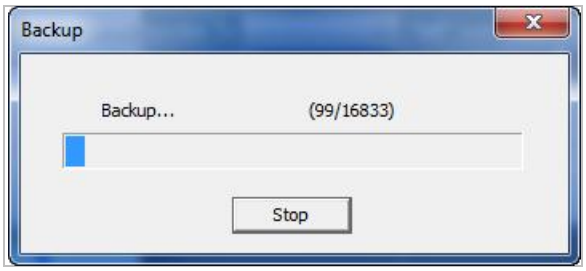
When the **Backup** button is clicked, the following window is displayed as below.



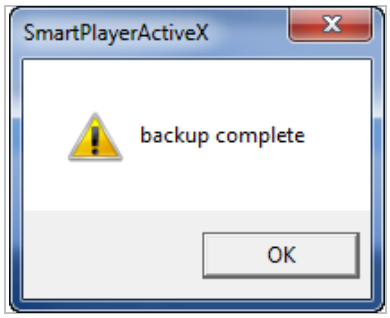
Select Camera	Check the camera to backup. For **AVI** backup, only one camera is permitted. For **FJP, IDX**, multiple backup is allowed.
Backup Period	Select the time frame (Start date and time ~ End date and time) to backup.
Backup Type	Select either **AVI** or **FJP, IDX** format.
Backup Path	Select the HDD path where the backup file will be saved.

After selecting the parameters, click **OK** then the following window will display.

After searching is finished, backup operation will start.



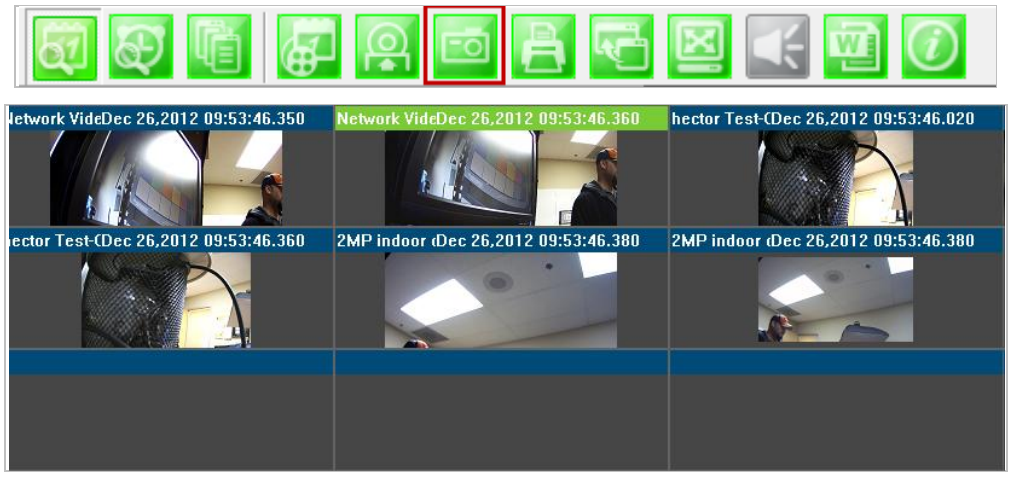
When backup is completed, the following window will appear. Click **OK** button.



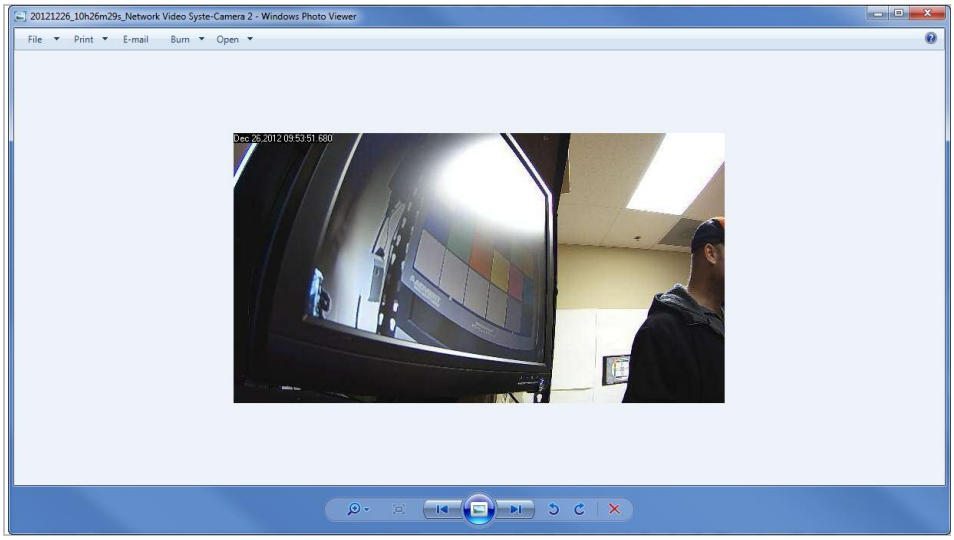
Note: For AVI file backup, only one camera is allowed. For IDX backup, multiple cameras are allowed.

33.4. Snapshot

Choose the camera currently being played or paused, click **Snapshot** button. Then a snapshot file will be saved in a designated path.



The below picture is a result of snapshot from the above window.

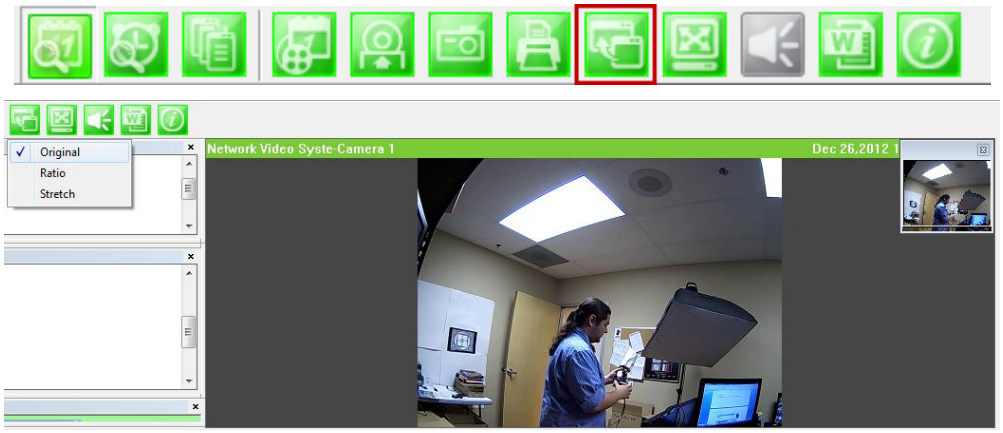


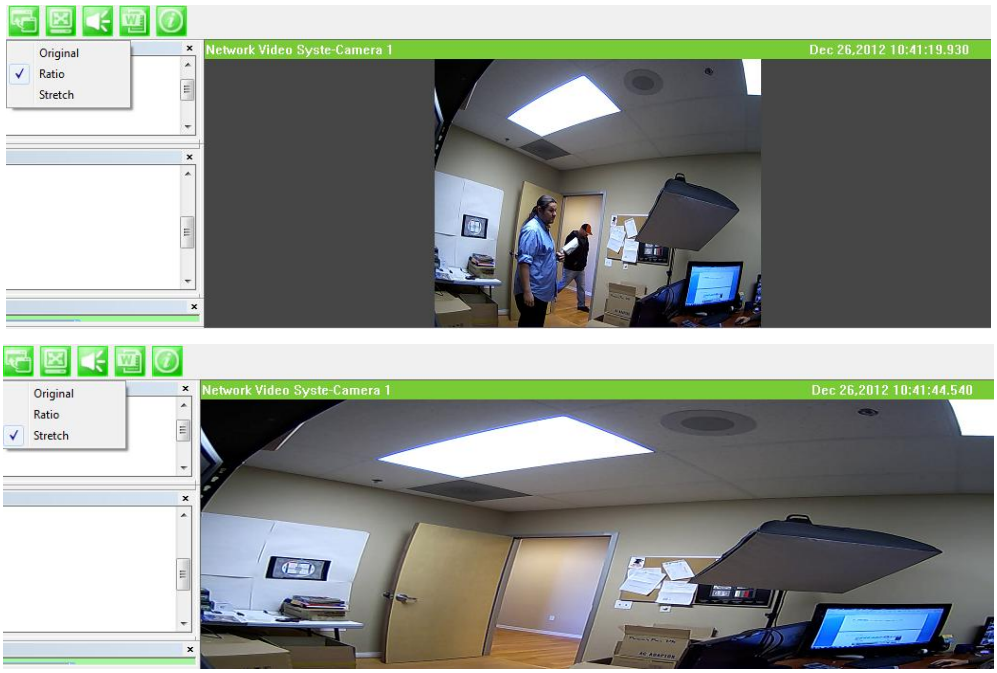
33.5. Print

Choose the camera currently being played or paused, then click **Print** button. Then the image of the selected camera will be sent to your default printer.

33.6. Ratio Display

You have three options to view videos, which are **Original**, **Ratio**, and **Stretch**.

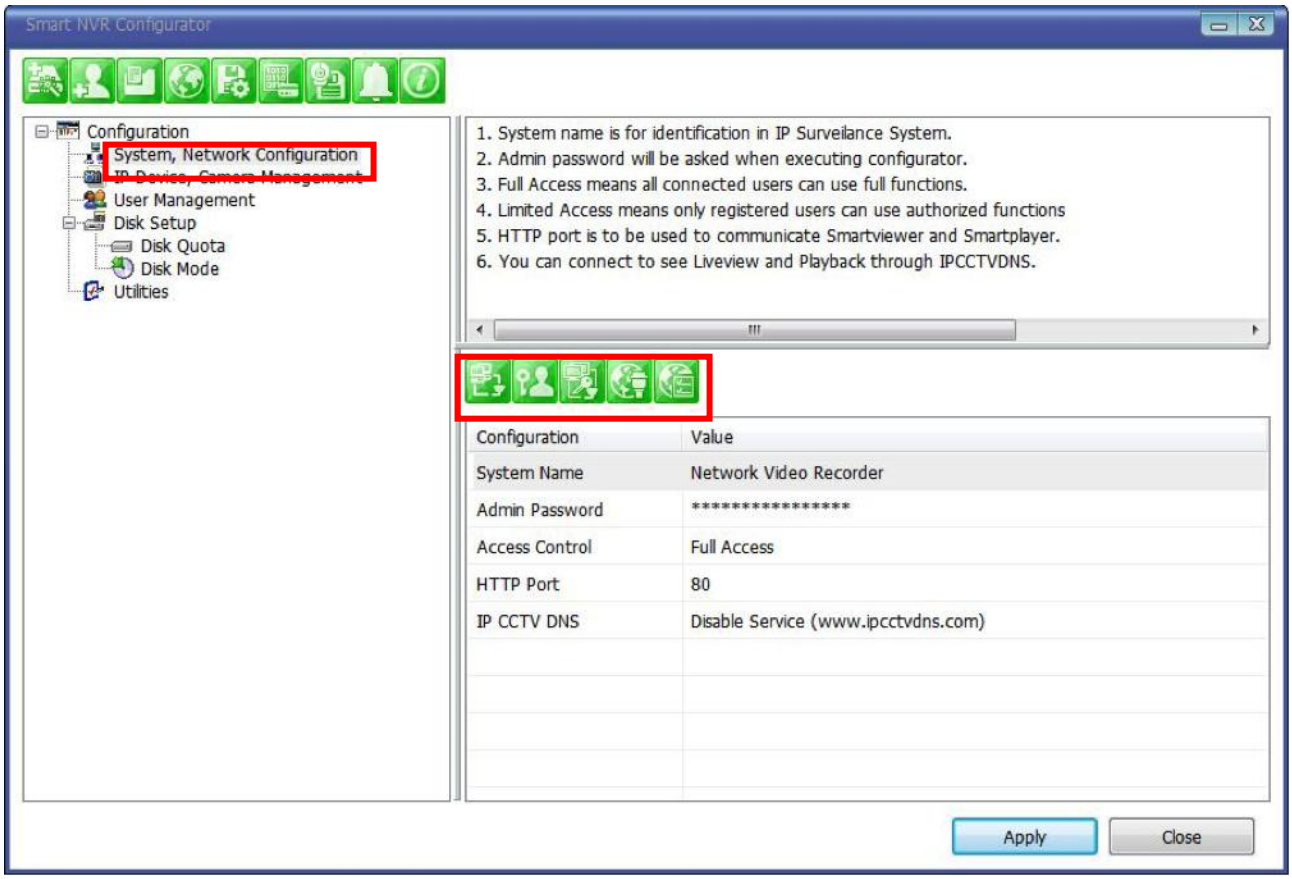




34. EN-V-R Configuration

34.1. System, Network Configuration

General system and network properties of EN-V-R program can be set up in this section. To start, select **System, Network Configuration** from the menu list.



	Items	Descriptions
	System Name Setting	Enter the system's name.
	Set up Admin password	Modify the password for Admin.
	Access Control	Configure the access privileges of users.
	HTTP Port Assign	Assign an HTTP Port for EN-V-R Service.
	Configure IP-CCTV DNS	Configure IP-CCTV DNS for EN-V-R Service

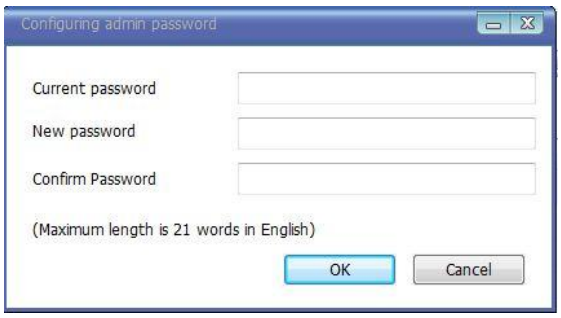
34.1.1. Configuring System name

To name the system, click configuring system name, the following window will be displayed. Change the name as desired.

Items	Descriptions
System name	Type in a System name.
OK	Click this button to apply the entered System Name.
Cancel	Click this button to discard the configured System name.

34.1.2. System, Network Configuration - Admin password

To assign Password for the admin, click **System, Network Configuration** on the menu tree. Click configure admin password



Items	Descriptions
Current password	Enter the Current password.
New password	Enter a new password to use.
Confirm Password	Enter the new password again to confirm.
OK	Click this button to apply the changed password.
Cancel	Click this button to discard the change.

34.1.3. System, Network Configuration - Access Control

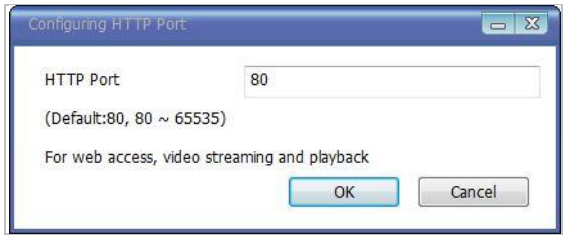
To configure User Access Control, click **System, Network Configuration** on the menu tree. Click configure access control

Configuring user authentication
Full Access (View and control camera audio without limitation)
Limited Access (In accordance with user's permission)
OK
Cancel

Items	Descriptions
Full Access	Set Full Access for the user. Anyone can connect to the EN-V-R without authentication, and be allowed live view, audio, PTZ, playback.
Limited Access	Set Limited Access for the user. Only the users with proper permission to the camera can access it.
OK	Click this button to apply the change.
Cancel	Click this button to discard the change.

34.1.4. System, Network Configuration - HTTP Port

To configure HTTP port to use, click **System, Network Configuration** on the menu tree. Then click Change HTTP Port



Items	Descriptions
HTTP Port	Enter a HTTP Port to use in the EN-V-R Service. (Default is 80)
OK	Click this button to apply the changed HTTP port number.
Cancel	Click this button to apply discard the changed port number.

Note: If a firewall is enabled in your Windows, you should set the above HTTP port number to be allowed in your computer.

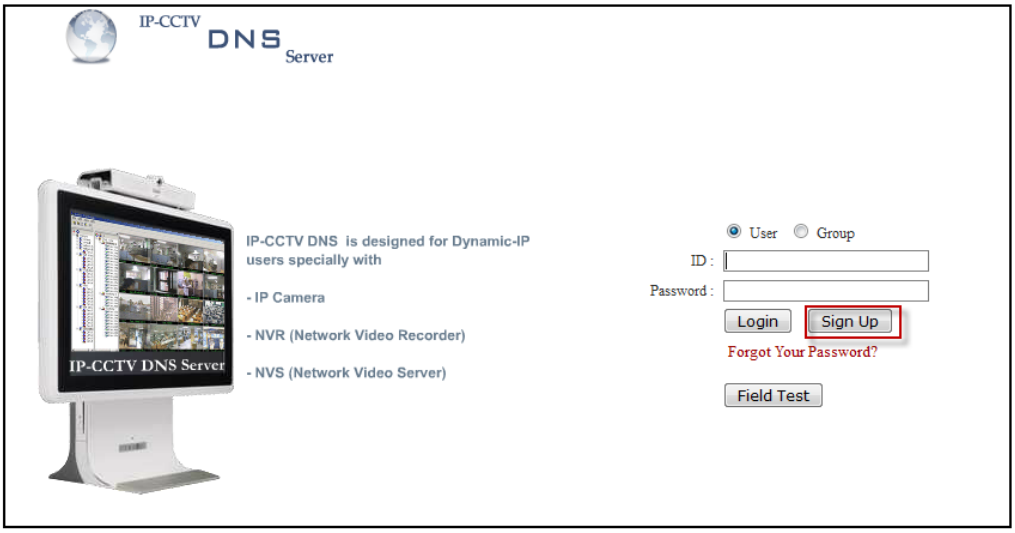
34.1.5. System, Network Configuration - IP-CCTV DNS

To configure IP CCTV-DNS, click **System, Network Configuration** on the menu tree. Click Configure IP-CCTV-DNS

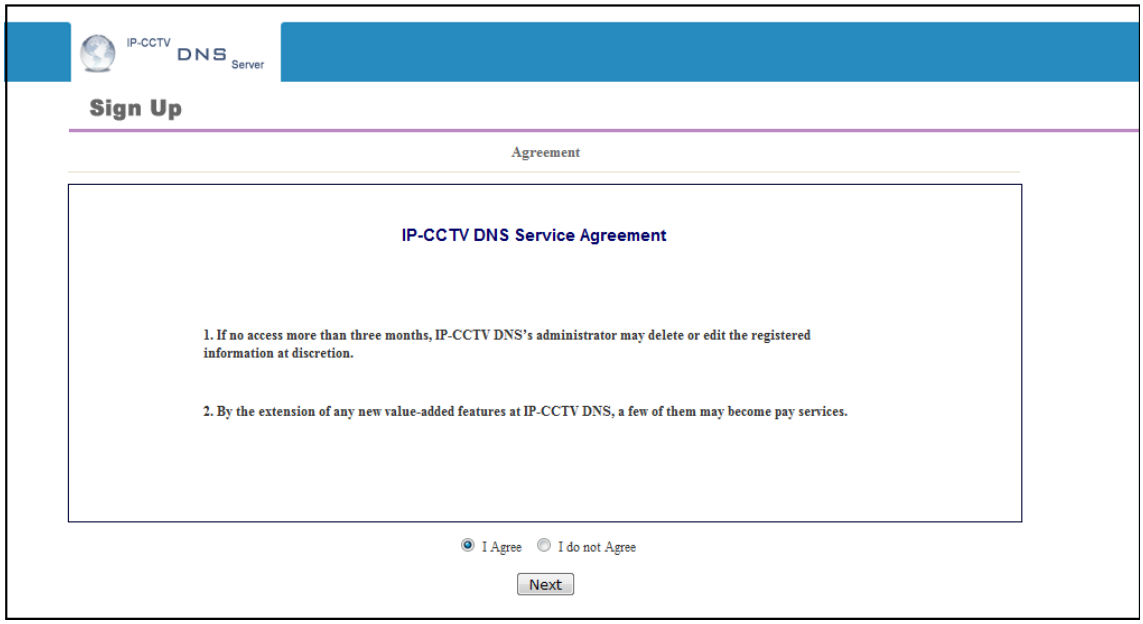
Items	Descriptions
Service	Set to use IP CCT DNS or not.
DNS Server IP	Vitek IP CCTV DNS address already entered.
Go Server	Directs to Vitek IP CCTV DNS server
MAC	MAC address of EN-V-R already entered
Product Key	Product Key of EN-V-R already entered
External Port	Enter an external HTTP Port to use for IP CCTV DNS service. (Default is 80)
Register verify	Click to test the connection with IP CCTV DNS server after setting is done in IP CCTV DNS server.
OK	Click this button to apply the changed IP CCTVV DNS settings.
Cancel	Click this button to discard the changed IP CCTV DNS settings

35. IP-CCTV DNS Registration

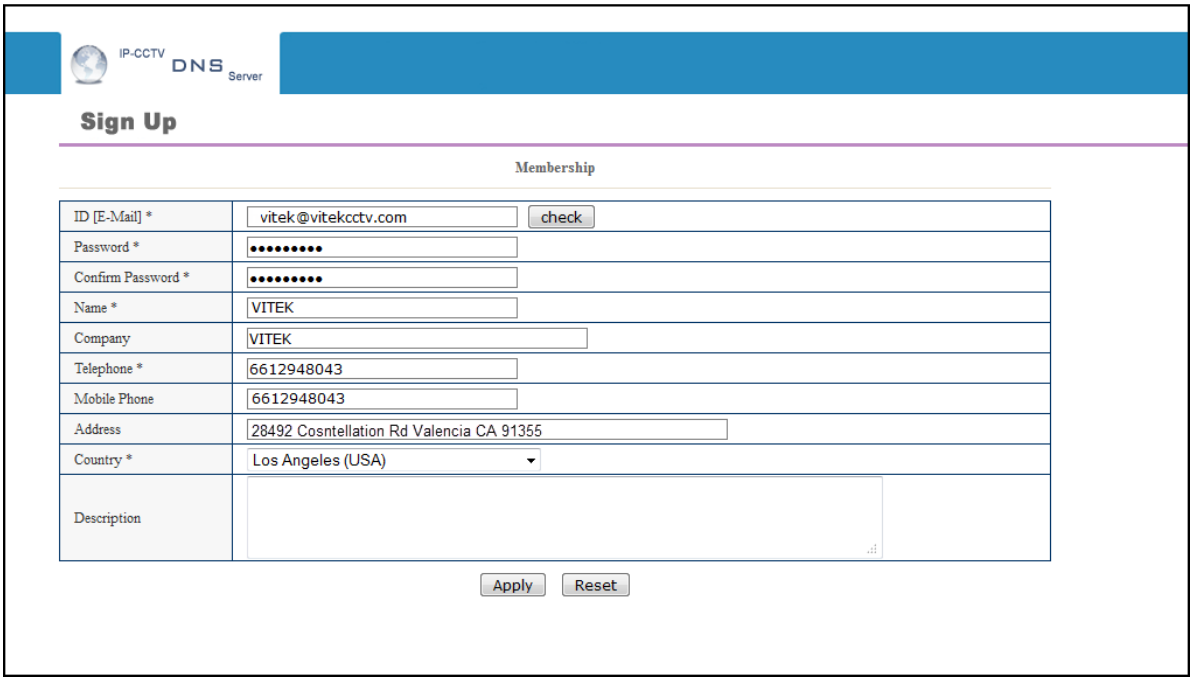
To register your camera / server please visit http://www.ipcctvdns.com



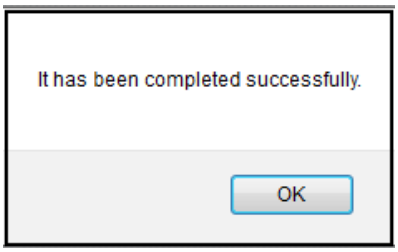
If this is your first visit your need to **Sign Up** if you abide by the Agreement, click on "I Agree" than on the NEXT button as shown below.


IP-CCTV DNS Server
Sign Up
Agreement
IP-CCTV DNS Service Agreement
1. If no access more than three months, IP-CCTV DNS's administrator may delete or edit the registered information at discretion.
2. By the extension of any new value-added features at IP-CCTV DNS, a few of them may become pay services.
I Agree
I do not Agree
Next

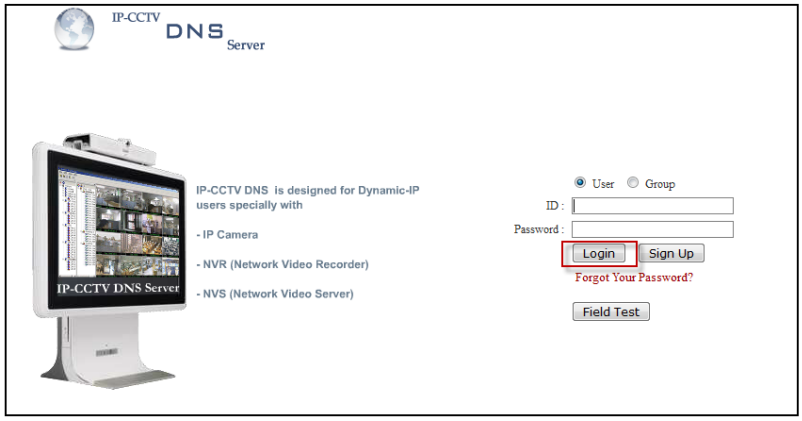
Fill out the requested information as shown below and click on **Apply**.



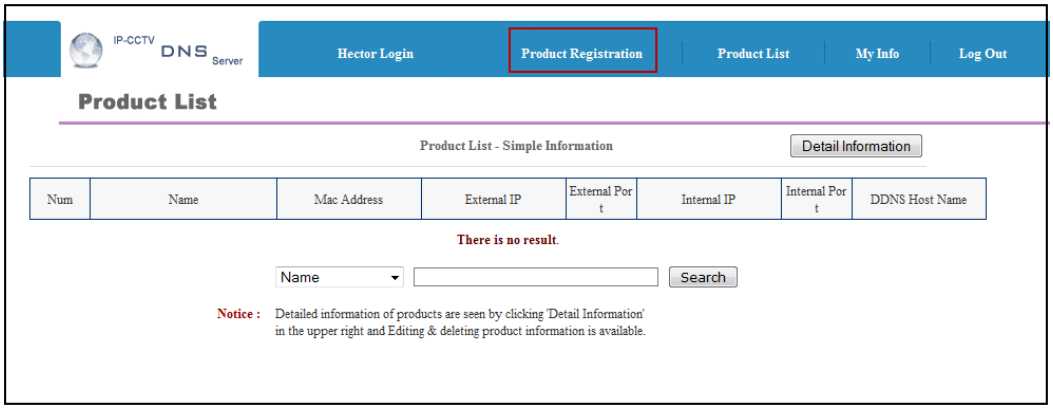
The following screen will confirm that your Membership has been completed successfully, that click **OK**.



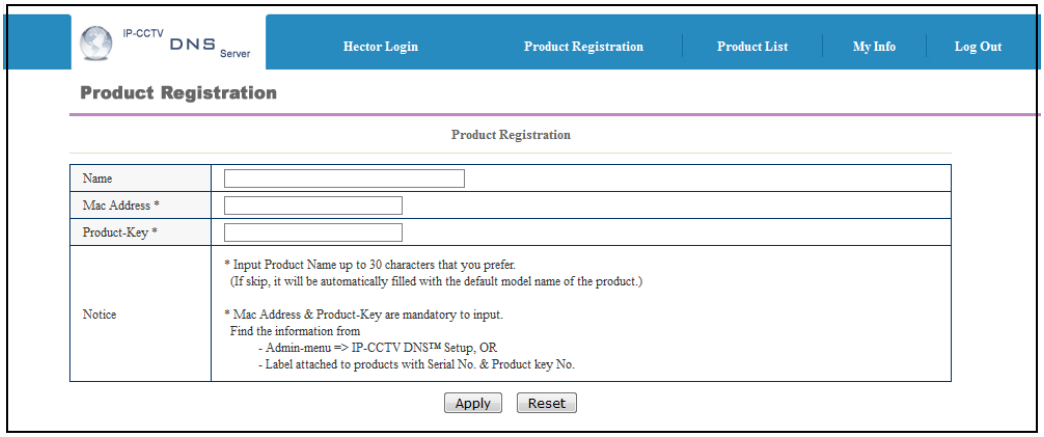
You will be brought back to the main page of the IPCCTVDNS website; in this case you need to **Login** with the information previously created.



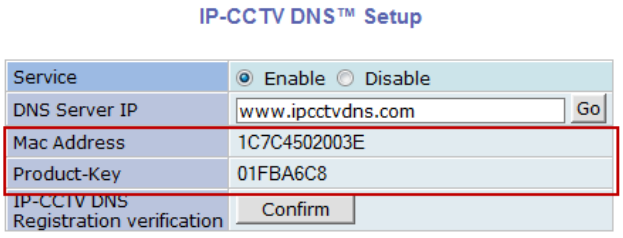
To register your first product, click on **Product Registration** as shown below.



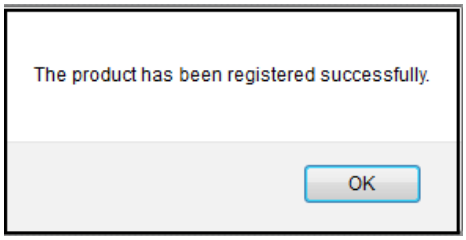
Enter the requested information (The name of your camera, the Mac Address and product Key) as shown below.


IP-CCTV DNS Server
Hector Login
Product Registration
Product List
My Info
Log Out
Product Registration
Product Registration
Name
Mac Address *
Product-Key *
Notice
* Input Product Name up to 30 characters that you prefer.
(If skip, it will be automatically filled with the default model name of the product.)
* Mac Address & Product-Key are mandatory to input.
Find the information from
- Admin-menu => IP-CCTV DNS™ Setup, OR
- Label attached to products with Serial No. & Product key No.
Apply
Reset

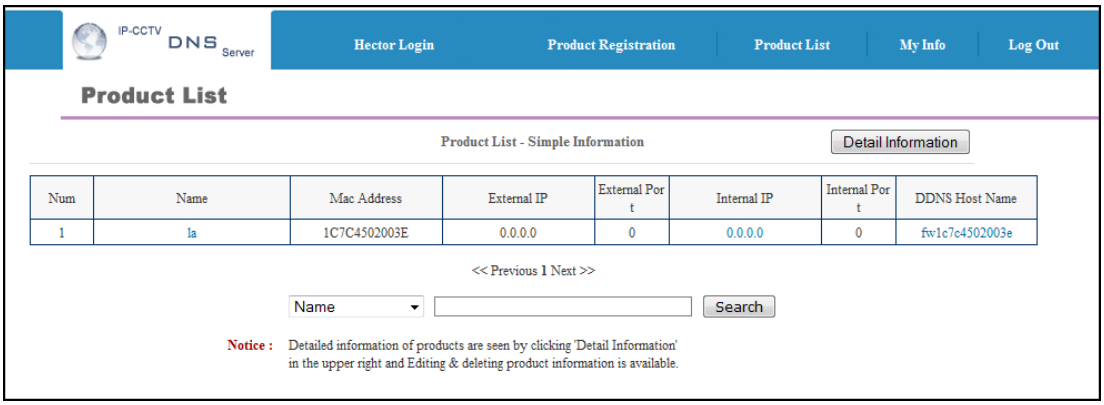
Note that the Mac Address and the product Key will be available under the Network Configuration**>> IP-CCTV DNS setup** in the camera menu. Please see image below.



A window will pop up confirming that your product has been registered successfully, click on **OK**.

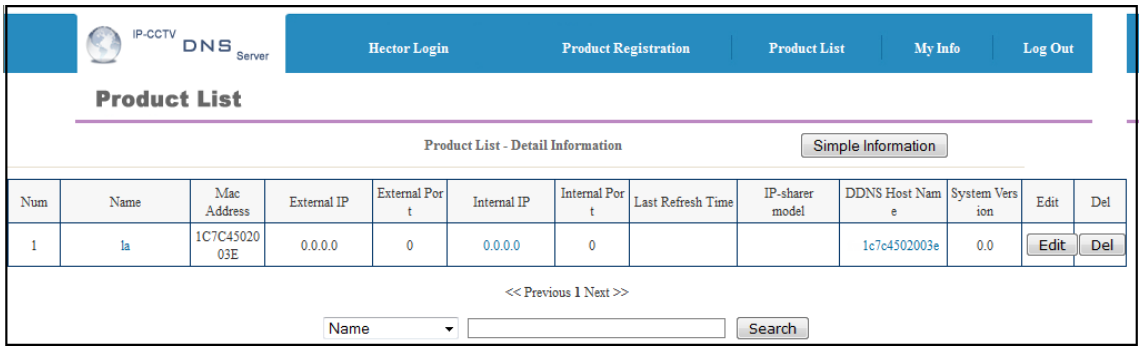


You will be directed to the *Product List* page where you will be able to see your recent camera registration.

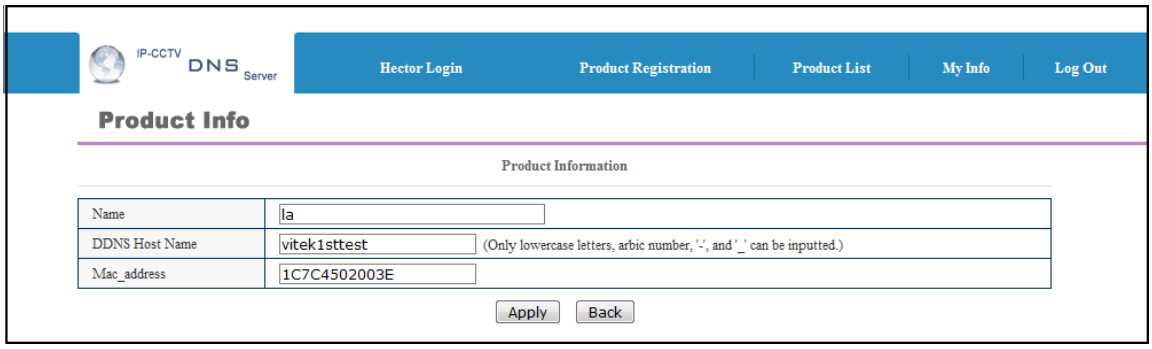


By clicking the **Detail Information** tab you will be allow edit DDNS Host Name

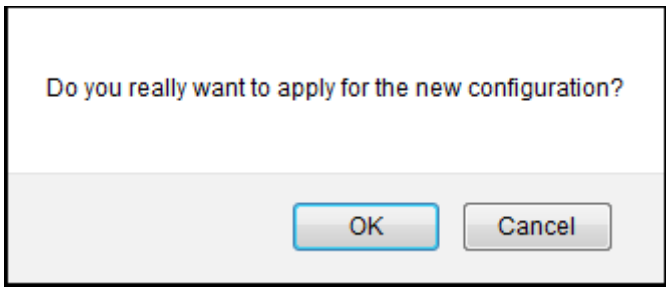
Click Edit to change the DDNS Host Name.



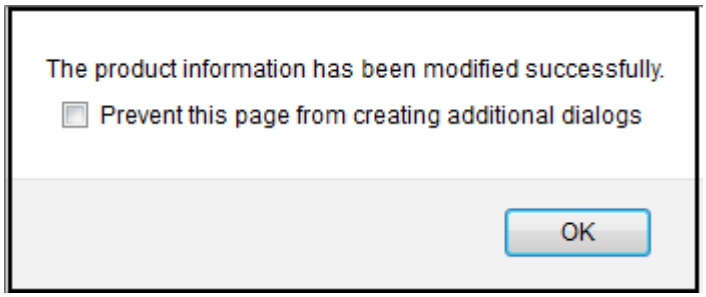
Type in desired host name than click **Apply**.



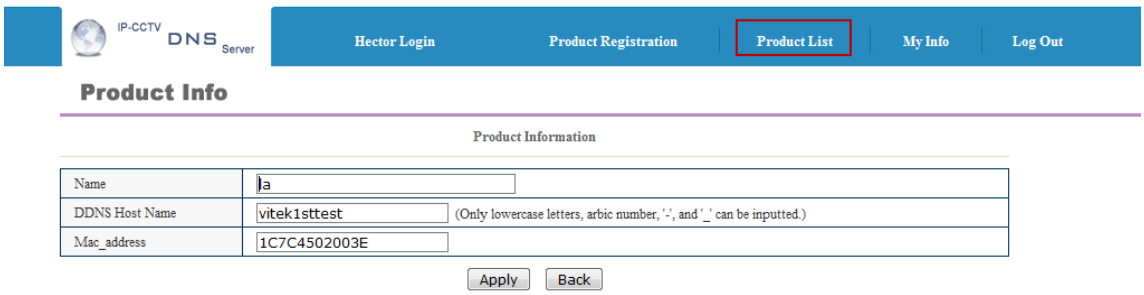
A window will pop up asking if you really want to apply the new configurations, to continue click **OK**.



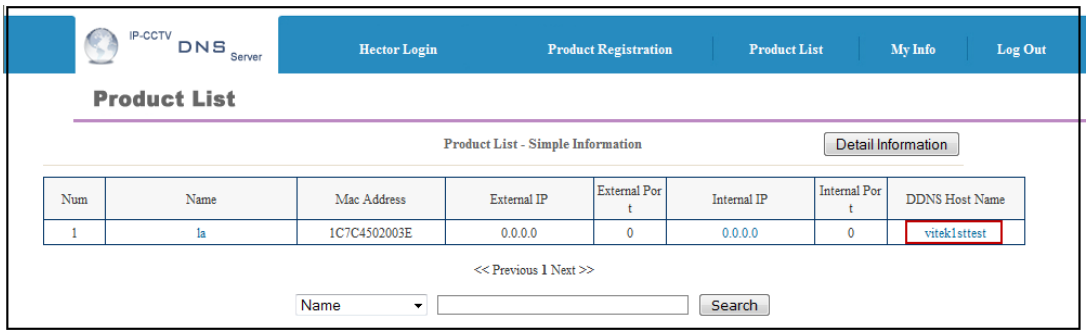
A window will pop up confirming that the product information has been modified successfully, click **OK**.



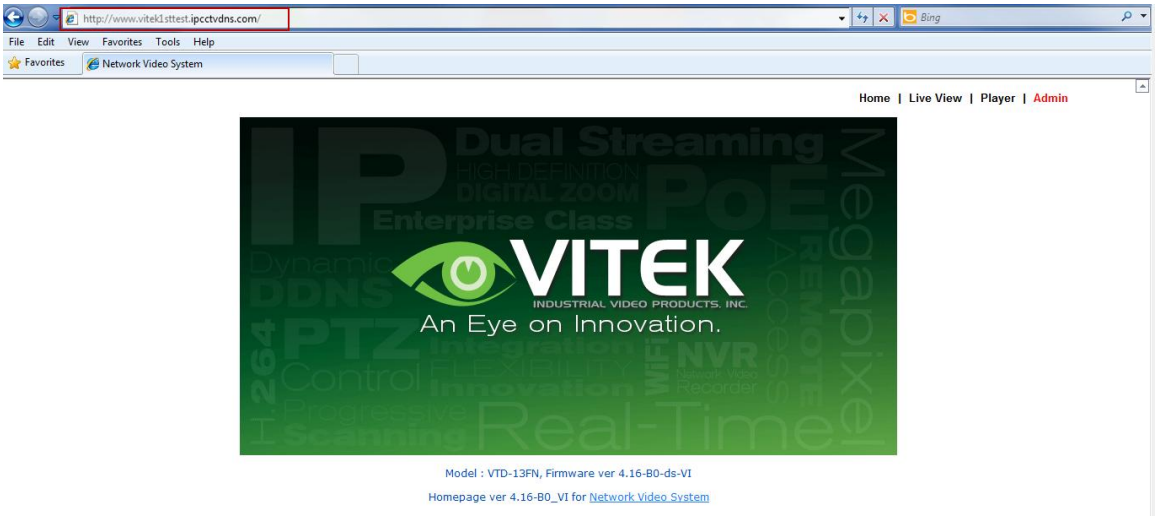
Click under **Product List** to view your changes



Your camera with the new DDNS Host name will be displayed.

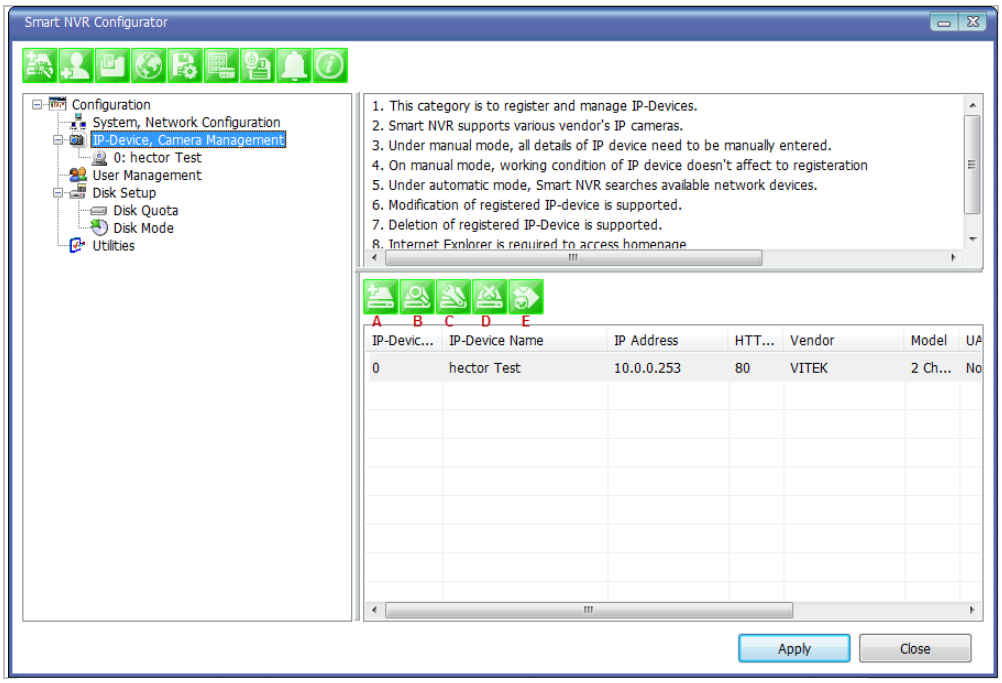


Your camera is now registered and ready for use.


http://www.vitek1sttest.ipcctvdns.com/
File Edit View Favorites Tools Help
Favorites
Network Video System
Home | Live View | Player | Admin
VITEK
INDUSTRIAL VIDEO PRODUCTS, INC.
An Eye on Innovation.
Model : VTD-13FN, Firmware ver 4.16-B0-ds-VI
Homepage ver 4.16-B0_VI for Network Video System

36. IP-Device Registration

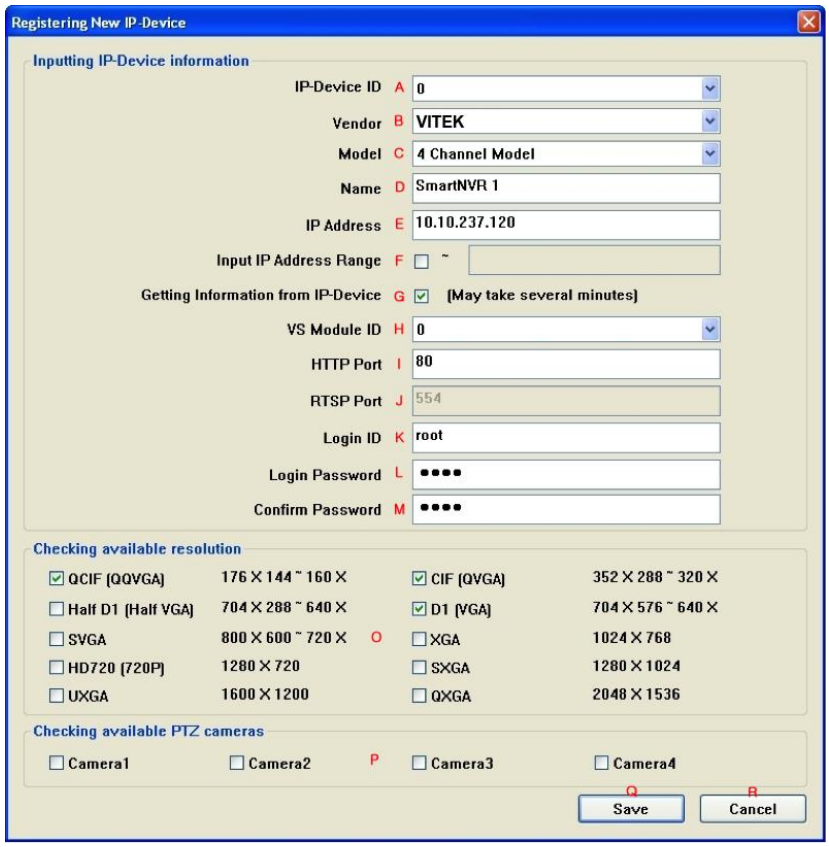
You will see how to manage IP devices in this section, which includes registering, modifying, and deleting IP devices. To start managing IP devices, select **IP-Device, Camera Management** from the menu list.

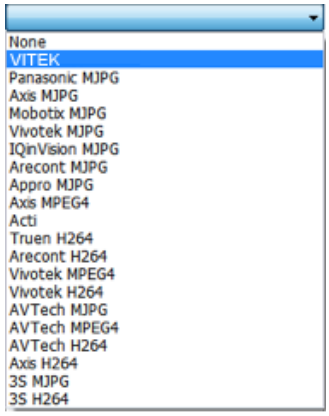

Smart NVR Configurator
Configuration
System, Network Configuration
IP-Device, Camera Management
0: hector Test
User Management
Disk Setup
Disk Quota
Disk Mode
Utilities
1. This category is to register and manage IP-Devices.
2. Smart NVR supports various vendor's IP cameras.
3. Under manual mode, all details of IP device need to be manually entered.
4. On manual mode, working condition of IP device doesn't affect to registeration
5. Under automatic mode, Smart NVR searches available network devices.
6. Modification of registered IP-device is supported.
7. Deletion of registered IP-Device is supported.
8. Internet Explorer is required to access homepage
A B C D E
IP-Devic... IP-Device Name IP Address HTT... Vendor Model UA
0 hector Test 10.0.0.253 80 VITEK 2 Ch... No
Apply
Close

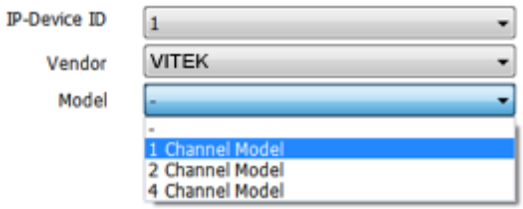
		Items	Descriptions
	A	IP-Device Manual Registration	Register IP-Devices manually by users.
	B	IP-Device Automatic Registration	Scan and register IP-Devices automatically by the program.
	C	IP-Device Modification	Modify the information of registered IP-Devices.
	D	IP-Device Deletion	Delete IP-Devices previously registered.
	E	IP-Device Homepage	Go to the homepage of the IP-Device.

36.1. IP-Device Registration (Manual)

To manually register an IP-Device, click IP**-Device, Camera Management** on the menu tree. Click Register IP device manually.



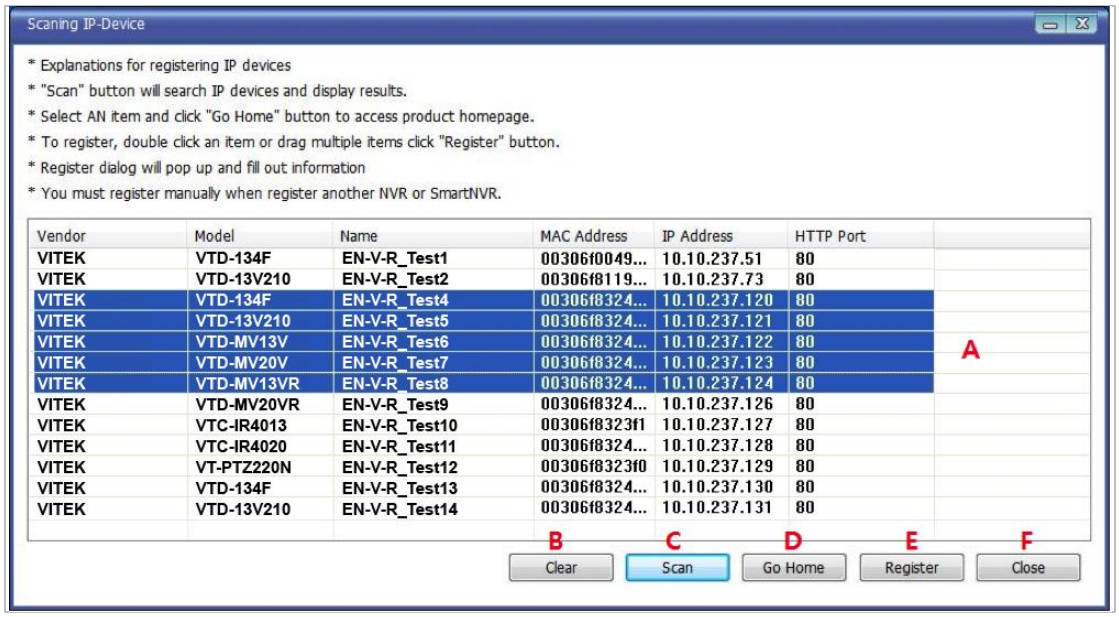
	Item	Description
A	IP-Device ID	Select the IP-Device ID to register.
B	Vendor	Select the Vendor name of the IP-Device to register. Click the pull-down list, and choose a proper vendor name from the list. 
C	Model	Select the total number of channels (streams) the IP device has. Click the pull-down list, and choose proper one from the list.



D	Name	Type in the name of the IP-Device.
E	IP Address	Type in the IP Address to use with the IP-Device. IPCCTVDNS or URL addresses are also supported. (If Input IP Address Range box is checked, then the starting address of the range will be selected.)
F	Input IP Address Range	Enter the last IP address of the range.
G	Getting Information from IP-Device	Check this box if the information from IP-Device needs to be acquired.
H	VS Module ID	Select the VS Module ID. Enter 0 for non-Vitek IP devices. Vitek products can be set to 0 to 15, and default is 0.
I	HTTP Port	Enter the HTTP Port to use with the IP-Device. (Default is 80)
J	RTSP Port	Enter the RTSP Port (Default is 554)
K	Login ID	Type in the Login ID to use. (Default is root)
L	Login Password	Type in the Login Password to use for the Login ID. (Default is root)
M	Confirm Password	Type in the same password to confirm. (Default is root)
O	Checking available resolution	Select the Video Resolution for the device. *Not used, all resolution is done at camera level*
P	Checking available PTZ camera	Checkboxes to choose if PTZ is supported on the IP device.
Q	OK	Click this button to apply the configured values.
R	Cancel	Click this button to discard the configured values.

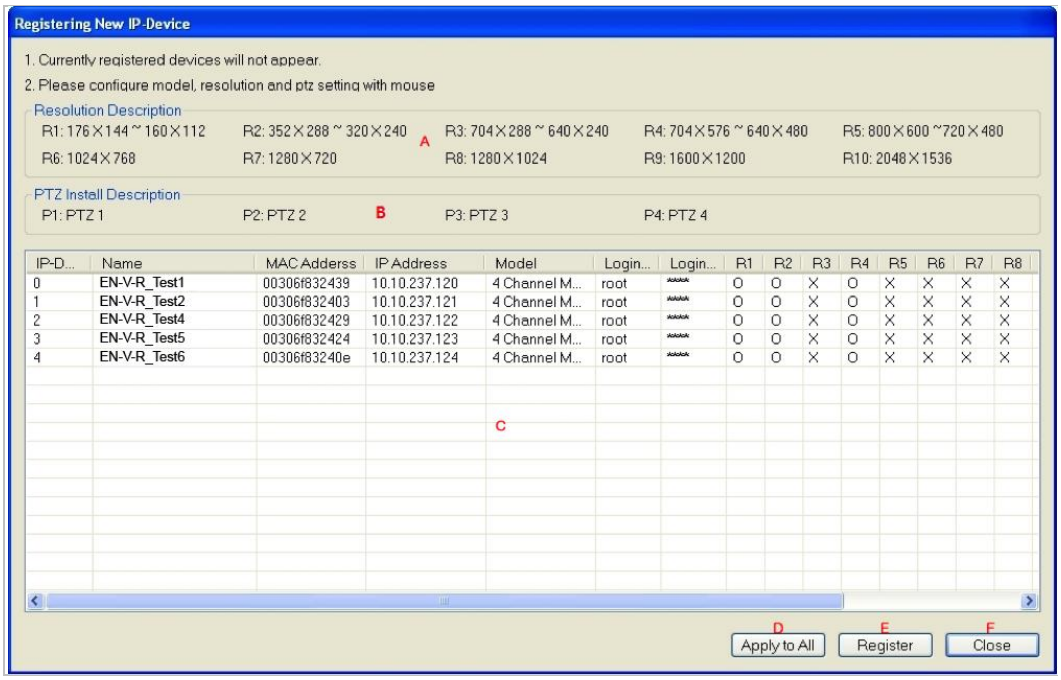
36.2. IP-Device Registration (Automatic)

To register an IP-Device by automatic scanning, click **IP-Device, Camera Management** on the menu tree. Then Click Scan available IP devices and register


Scaning IP-Device
* Explanations for registering IP devices
* "Scan" button will search IP devices and display results.
* Select AN item and click "Go Home" button to access product homepage.
* To register, double click an item or drag multiple items click "Register" button.
* Register dialog will pop up and fill out information
* You must register manually when register another NVR or SmartNVR.
Vendor Model Name MAC Address IP Address HTTP Port
VITEK VTD-134F EN-V-R_Test1 00306f0049... 10.10.237.51 80
VITEK VTD-13V210 EN-V-R_Test2 00306f8119... 10.10.237.73 80
VITEK VTD-134F EN-V-R_Test4 00306f8324... 10.10.237.120 80
VITEK VTD-13V210 EN-V-R_Test5 00306f8324... 10.10.237.121 80
VITEK VTD-MV13V EN-V-R_Test6 00306f8324... 10.10.237.122 80
VITEK VTD-MV20V EN-V-R_Test7 00306f8324... 10.10.237.123 80
VITEK VTD-MV13VR EN-V-R_Test8 00306f8324... 10.10.237.124 80
VITEK VTD-MV20VR EN-V-R_Test9 00306f8324... 10.10.237.126 80
VITEK VTC-IR4013 EN-V-R_Test10 00306f8323f1 10.10.237.127 80
VITEK VTC-IR4020 EN-V-R_Test11 00306f8324... 10.10.237.128 80
VITEK VT-PTZ220N EN-V-R_Test12 00306f8323f0 10.10.237.129 80
VITEK VTD-134F EN-V-R_Test13 00306f8324... 10.10.237.130 80
VITEK VTD-13V210 EN-V-R_Test14 00306f8324... 10.10.237.131 80
A
B
C
D
E
F
Clear
Scan
Go Home
Register
Close

	Items	Descriptions
A	IP-Device list	This list shows the IP devices found during the scan process. If you need to select multiple IP devices at the same time, drag your mouse over the devices or keep pressing CTRL or SHIFT key while clicking the IP devices.
B	Clear	Clear the scanned IP Devices from the list.
C	Scan	Start scanning for IP Devices on the network.
D	Go Home	Go to the home page of the IP device selected from the list.
E	Register	Go to the registration window for the IP Device selected.
F	Close	Cancel the registration of the IP device and exit the window.

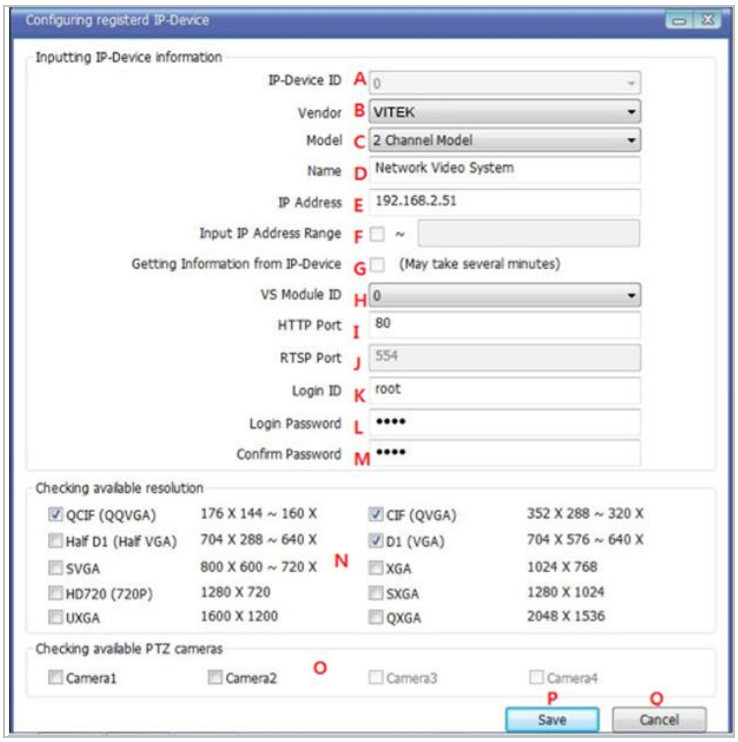
When you click the **Register** button after selecting more than one IP devices on the scanned device list, the following window will be displayed. You can register those IP devices to your EN-V-R in this window.


Registering New IP-Device
1. Currently registered devices will not appear.
2. Please configure model, resolution and ptz setting with mouse
Resolution Description
R1: 176X144 ~ 160X112
R2: 352X288 ~ 320X240
A
R3: 704X288 ~ 640X240
R4: 704X576 ~ 640X480
R5: 800X600 ~720X480
R6: 1024X768
R7: 1280X720
R8: 1280X1024
R9: 1600X1200
R10: 2048X1536
PTZ Install Description
P1: PTZ 1
P2: PTZ 2
B
P3: PTZ 3
P4: PTZ 4
IP-D... Name MAC Adderss IP Address Model Login... Login... R1 R2 R3 R4 R5 R6 R7 R8
0 EN-V-R_Test1 00306f832439 10.10.237.120 4 Channel M... root ***** O O X O X X X X
1 EN-V-R_Test2 00306f832403 10.10.237.121 4 Channel M... root ***** O O X O X X X X
2 EN-V-R_Test4 00306f832429 10.10.237.122 4 Channel M... root ***** O O X O X X X X
3 EN-V-R_Test5 00306f832424 10.10.237.123 4 Channel M... root ***** O O X O X X X X
4 EN-V-R_Test6 00306f83240e 10.10.237.124 4 Channel M... root ***** O O X O X X X X
C
D
Apply to All
E
Register
F
Close

	Items	Descriptions
A	Resolution Description	Descriptions of the image resolution modes in the IP-Device list.(R1, R2, R3, R4, R5, R6, R7, R8, R9, R10)
B	PTZ Install Description	Descriptions of the PTZ numbers in the IP-Device list. (P1, P2, P3, P4)
C	IP-Device list	IP-Device list to select from.
D	Apply to All	Click this button to copy the information of a selected IP-Device to all other devices.(Only Model, Login ID, and Login Password will be copied.)
E	Register	Click this button to confirm and save the registered IP-Device added.
F	Cancel	Click this button to cancel IP-Device registration.

IP-Device Modification

To modify an IP-Device registration, Click Modify registered IP-Device



	Items	Descriptions
A	IP-Device ID	IP-Device ID is displayed. (not allowed to modify)
B	Vendor	Select the Vendor of the device.
C	Model	Select how many channels the device support.
D	Name	Change the Name as required.
E	IP Address	Enter the IP Address to use with the selected device.
F	Input IP Address Range	(not allowed to modify)
G	Getting Information from IP-Device	(not allowed to modify)
H	VS Module ID	Select the VS Module ID. Enter 0 for non-Vitek IP devices. Vitek products can be set to 0 to 15, and default is 0.
I	HTTP Port	Enter the HTTP Port to use with the IP-Device. (Default is 80)
J	RTSP Port	Enter the RTSP Port (Default is 554)
K	Login ID	Type in the Login ID to use. (Default is root)
L	Login Password	Type in the Login Password to use for the Login ID. (Default is root)
M	Confirm Password	Type in the same password to confirm. (Default is root)
N	Checking available resolution	Select the Video Resolution for the device. *Not used, all resolution is done at camera level*
O	Checking available PTZ camera	Checkboxes to choose if PTZ is supported.
P	OK	Click this button to apply the changed values.

Q	Cancel	Click this button to discard the changed values.

36.3. IP-Device Deletion

To delete a registered IP-Device, click **IP-Device, Camera Management** on the menu tree in the left pane. Then select an IP device to be deleted from the list. Click Remove IP-Device registration

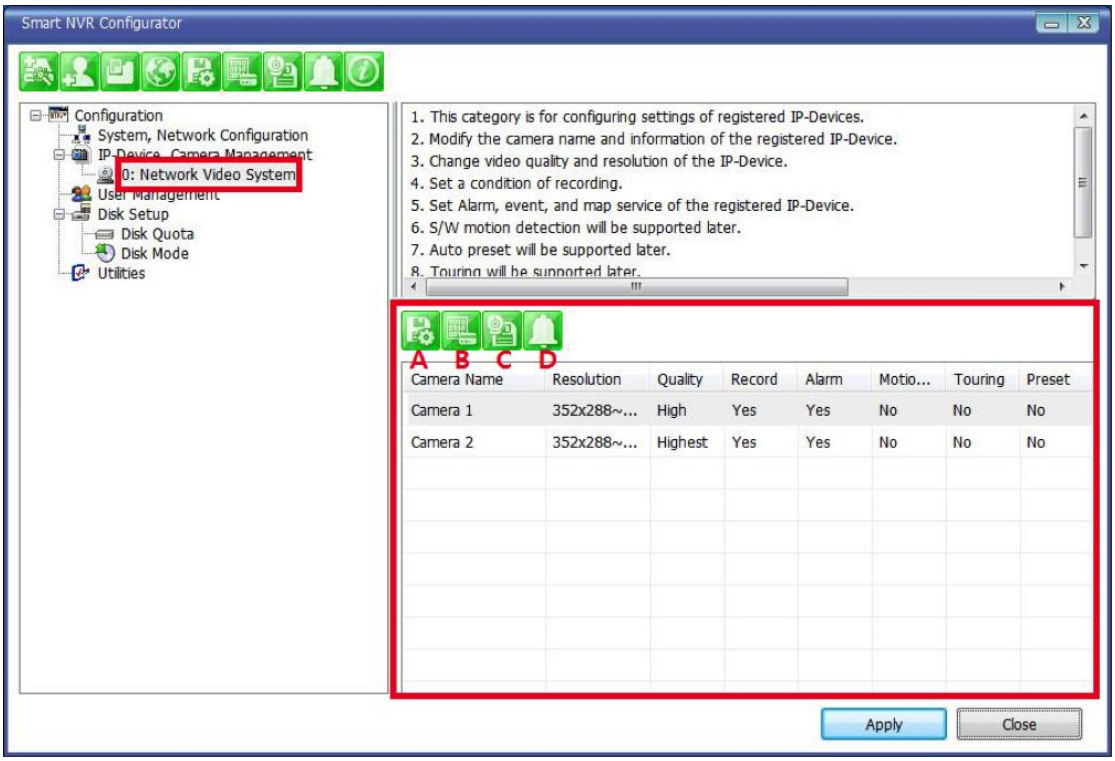
36.4. IP-Device Homepage

To go to the home page of an IP-Device, click the **IP-Device, Camera Management** on the menu tree. Then select the IP device. Click Go to IP-Device homepage

36.5. Camera Management

In this section, you will see how to manage the device information, video resolutions, recording configuration, and alarm event configuration. Firstly, select a camera name under **IP-Device, Camera Management** on the menu tree.

When you select **IP-Device, Camera Management** on the menu tree, it will show the **Camera Management** sub-menu. You can configure cameras here. The following picture shows when you selected an IP-device in the menu tree. The sub-menu toolbar changes accordingly to your selection.

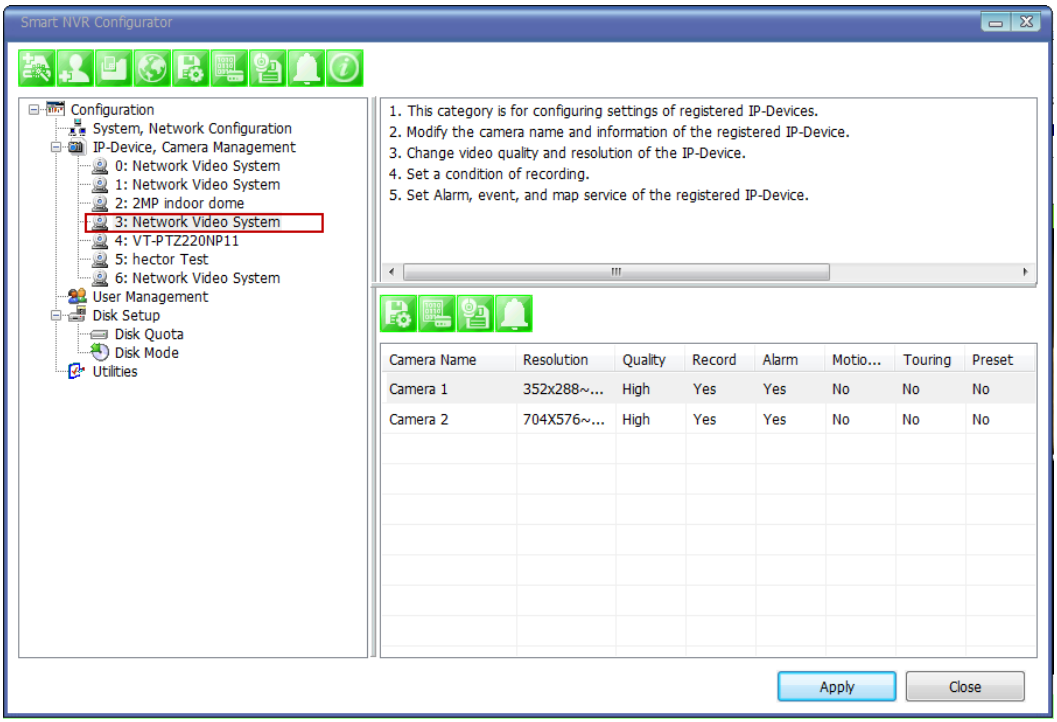

Smart NVR Configurator
Configuration
System, Network Configuration
IP-Device, Camera Management
0: Network Video System
User Management
Disk Setup
Disk Quota
Disk Mode
Utilities
1. This category is for configuring settings of registered IP-Devices.
2. Modify the camera name and information of the registered IP-Device.
3. Change video quality and resolution of the IP-Device.
4. Set a condition of recording.
5. Set Alarm, event, and map service of the registered IP-Device.
6. S/W motion detection will be supported later.
7. Auto preset will be supported later.
8. Touring will be supported later.
A B C D
Camera Name | Resolution | Quality | Record | Alarm | Motio... | Touring | Preset
Camera 1 | 352x288~... | High | Yes | Yes | No | No | No
Camera 2 | 352x288~... | Highest | Yes | Yes | No | No | No
Apply
Close

Items	Descriptions

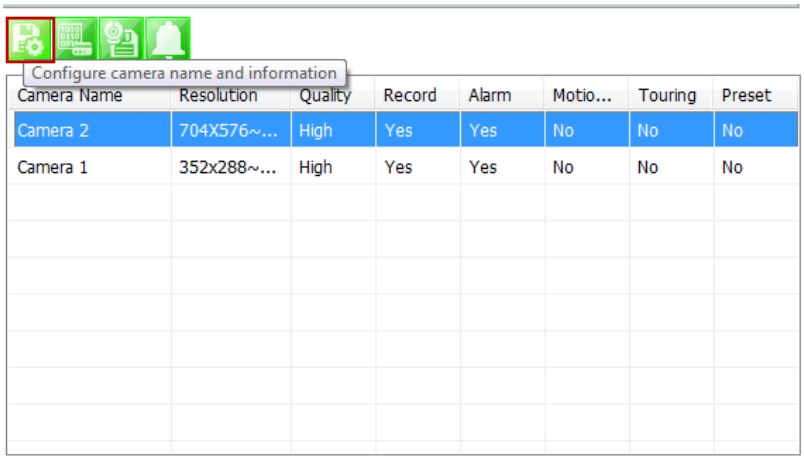
	A	Camera Information	Configure Information of the selected camera.
	B	Resolution and Quality	Choose the resolution and quality of cameras.
	C	Recording Conditions	Set up recording conditions.
	D	Alarm and Map service settings	Configure Alarm and Map service functions.

36.5.1. Configure Camera Name and Information

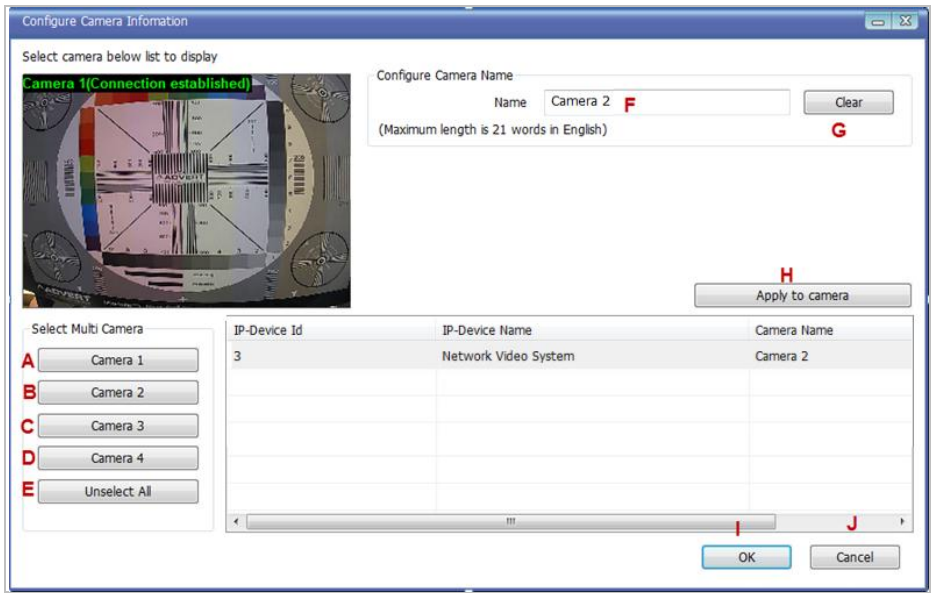
From the configuration list, select a camera to be assigned with a name.


Smart NVR Configurator
Configuration
System, Network Configuration
IP-Device, Camera Management
0: Network Video System
1: Network Video System
2: 2MP indoor dome
3: Network Video System
4: VT-PTZ220NP11
5: hector Test
6: Network Video System
User Management
Disk Setup
Disk Quota
Disk Mode
Utilities
1. This category is for configuring settings of registered IP-Devices.
2. Modify the camera name and information of the registered IP-Device.
3. Change video quality and resolution of the IP-Device.
4. Set a condition of recording.
5. Set Alarm, event, and map service of the registered IP-Device.
Camera Name Resolution Quality Record Alarm Motio... Touring Preset
Camera 1 352x288~... High Yes Yes No No No
Camera 2 704X576~... High Yes Yes No No No
Apply
Close

Then click on camera1 or camera 2, and then click Configure Camera Name and Information


Configure camera name and information
Camera Name Resolution Quality Record Alarm Motio... Touring Preset
Camera 2 704X576~... High Yes Yes No No No
Camera 1 352x288~... High Yes Yes No No No

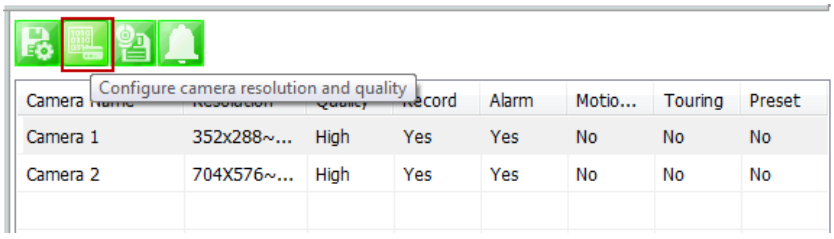
The below image will be display, enter name (F), then click **Apply to camera** (H), then **OK.**



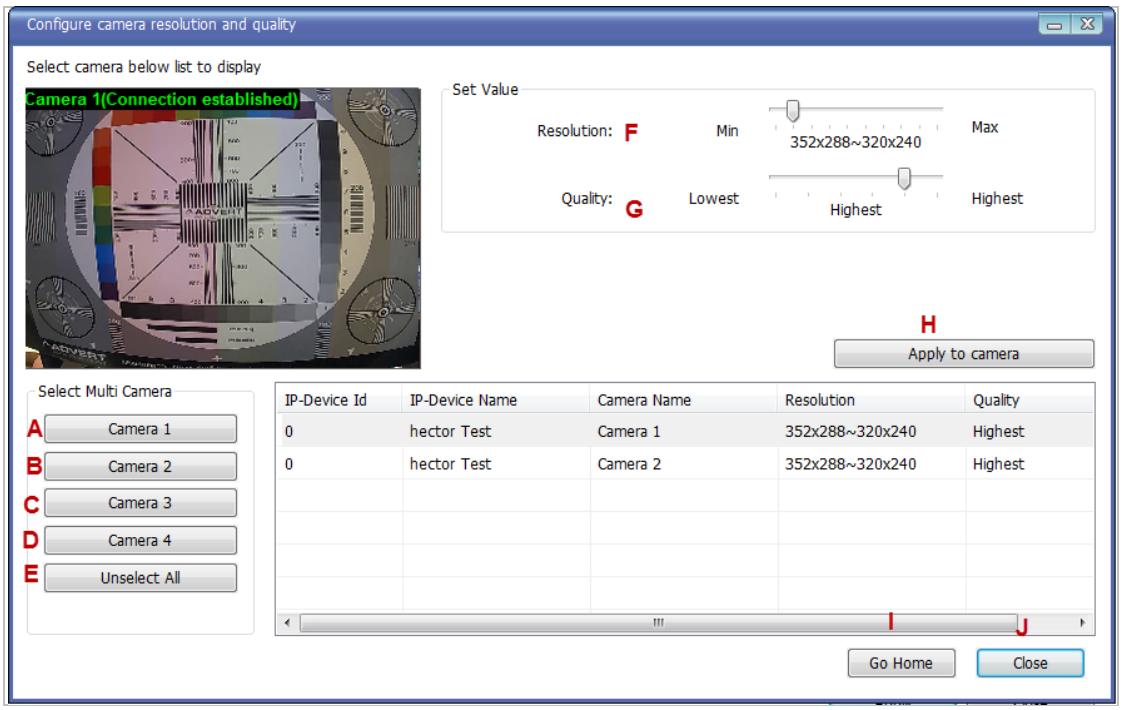
	Items	Descriptions
A,B,C,D	Camera Selection	Select one or more cameras for name assignment by clicking buttons.
E	Unselect All	Clear the device list which shows the selected cameras.
F	Name	Type in a camera name.
G	Clear	Clear the camera name field.
H	Apply to Camera	Apply the changed camera name to the system.
I	OK	Click this button to confirm the change and close the window.
J	Cancel	Click this button to cancel the change and close the window.

36.5.2. Camera Resolution, Quality

To configure a camera's resolution and video quality, select a camera to configure and click **Configure camera resolution and quality**



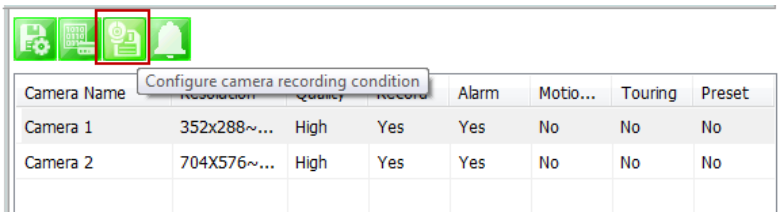
The below image will be display, adjust resolution (F), then click **Apply to camera** (H), then **OK**



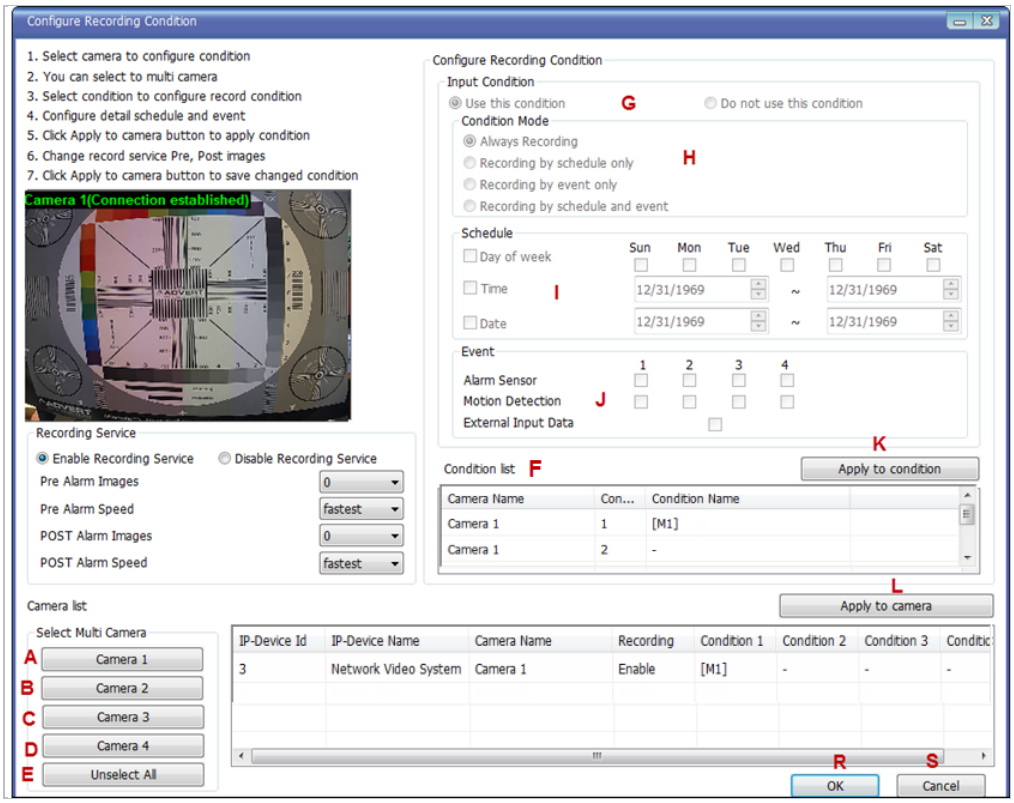
	Items	Descriptions
A,B,C,D	Camera Selection	Select one or more cameras by clicking buttons.
E	Unselect All	Clear the device list which shows the selected cameras.
F	Resolution	Select the video resolution.
G	Quality	Select the video quality.
H	Apply to Camera	Apply the selected video resolution and quality to the system.
I	Go Home	Go to the homepage of the product.
J	Close	Close and exit the window.

36.5.3. Configure Camera Recording Condition

To configure recording conditions, select a camera to configure, then click **Configure camera recording condition**



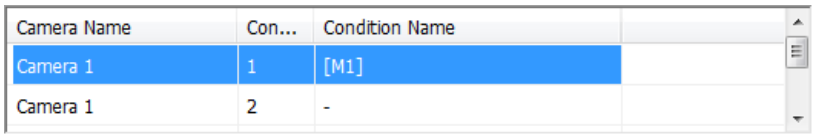
The below image is where you adjust the recording parameters.



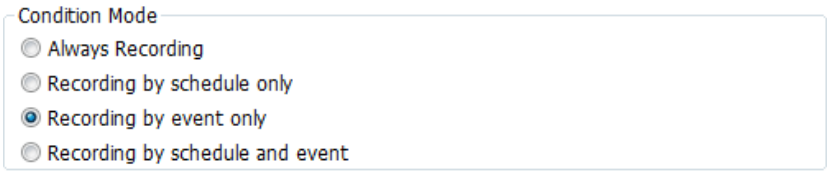
	Item	Description
A,B,C,D	Camera Selection	Select one or more cameras by clicking buttons.
E	Unselect All	Clear the device list which shows the selected cameras.
F	Condition List	Define the condition for recording to be started.
G	Condition to use	Decide whether to use the defined condition or not.
H	Condition Mode	Select the condition mode for recording.
I	Scheduling	Set up the schedule for recording.
J	Event setup	Set up the event to initiate recording.
K	Apply to Condition	Apply the configured schedule and event data to condition list.
L	Apply to Camera	Apply the condition to camera.
M	Enable Recording Service	Enable this to activate the recording. When this is not enabled, it won't be saved if a recording condition is set.

N	Pre Alarm Images	Select pre-alarm images.
O	Pre Alarm Speed	Select pre-alarm speed.
P	Post Alarm Images	Select post-alarm images.
Q	Post Alarm Speed	Select post-alarm speed
R	OK	Click this button to confirm the change and exit the window.
S	Cancel	Click this button to cancel the all the changed made in this session.

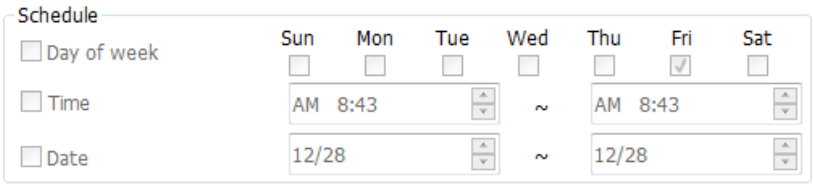
To setup recording, first click camera under *Condition list* (F).This enables the Configure Recording Condition (G, H, I and J)



Now you can select your *condition mode* (H). Under condition mode you have four choices always, schedule, event and schedule and event. (In this example we will record by event only)



Schedule: To schedule time and date of recording (I). (When schedule is activated in condition mode)

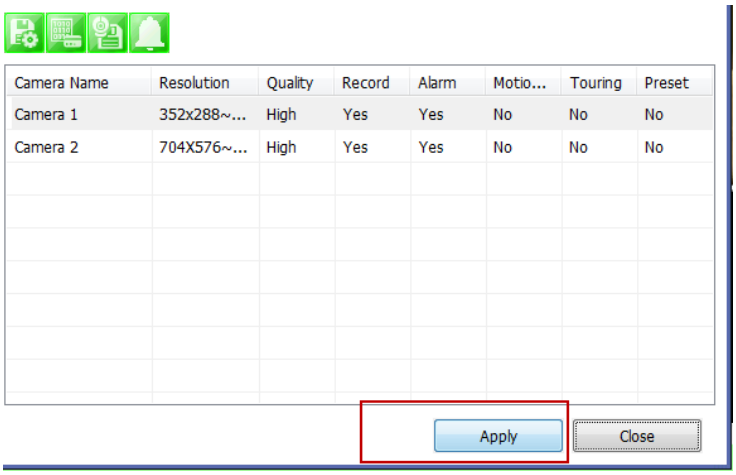


Event: Here you can select Alarm or Motion (J)

After completing your conditions selection click **Apply to condition** (K)

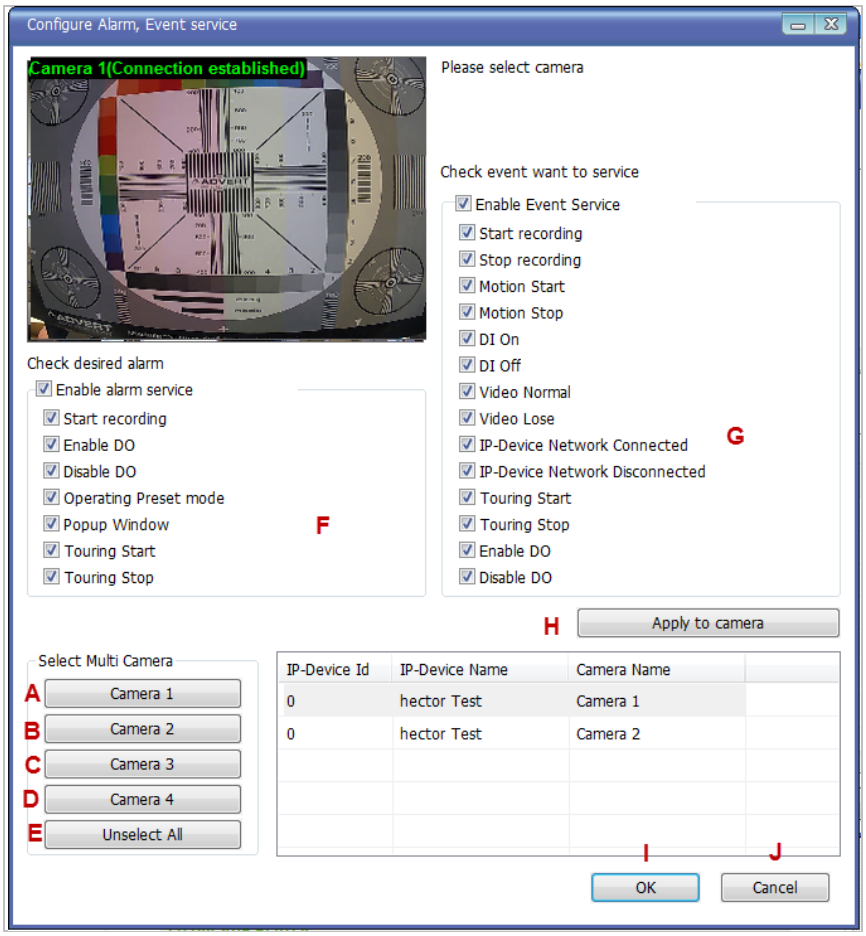
After apply to condition click **Apply to camera** (L), and then click **OK**(R)

When that screen closes click **Apply**



36.5.4. Alarm, Event Configuration

To configure the Alarm and Event features, select a camera to configure, and then click **Configure alarm, map service**

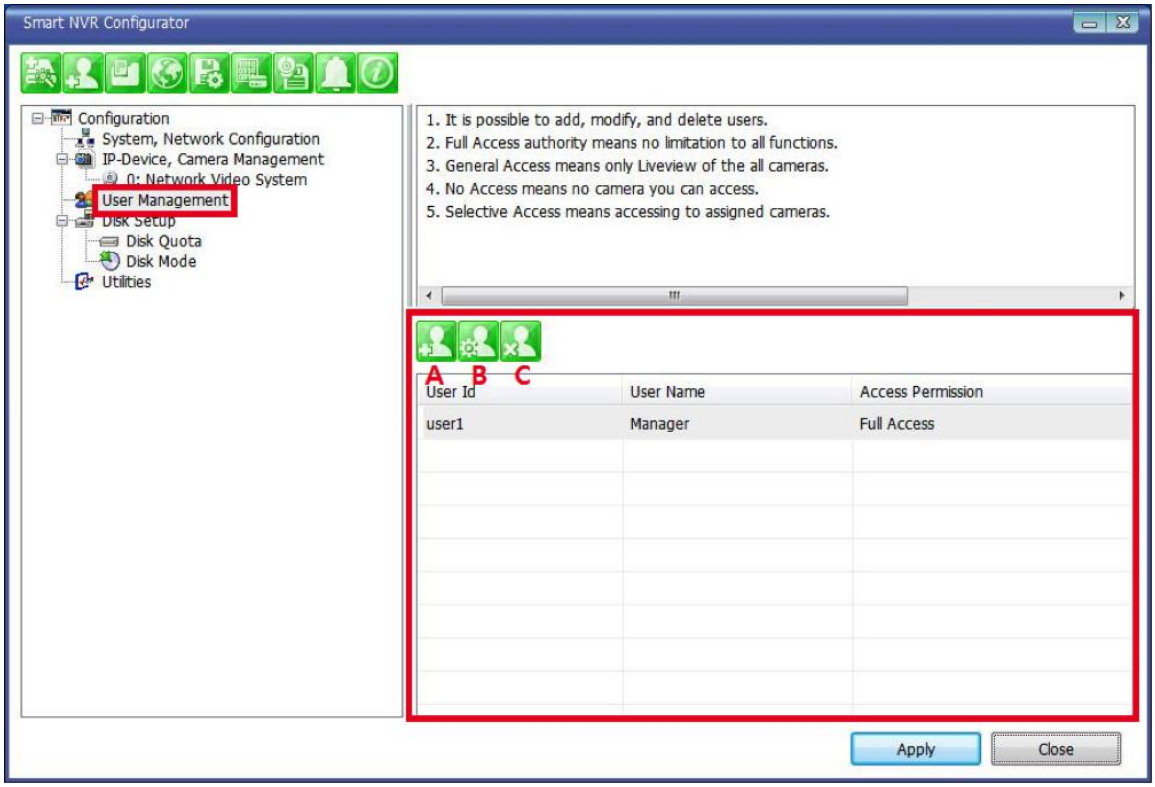


Item	Description

A,B,C,D	Camera Selection	Select one or more cameras by clicking buttons.
E	Unselect All	Clear the device list which shows the selected cameras.
F	Alarm Service Setup	Put check marks on alarm types to use.
G	Event Service Setup	Put check marks on event types to use.
H	Apply to Camera	Click this button to apply the changes to the camera.
I	OK	Click this button to confirm the change and exit the window.
J	Cancel	Click this button to cancel the Alarm, Event configuration.

36.6. User Management

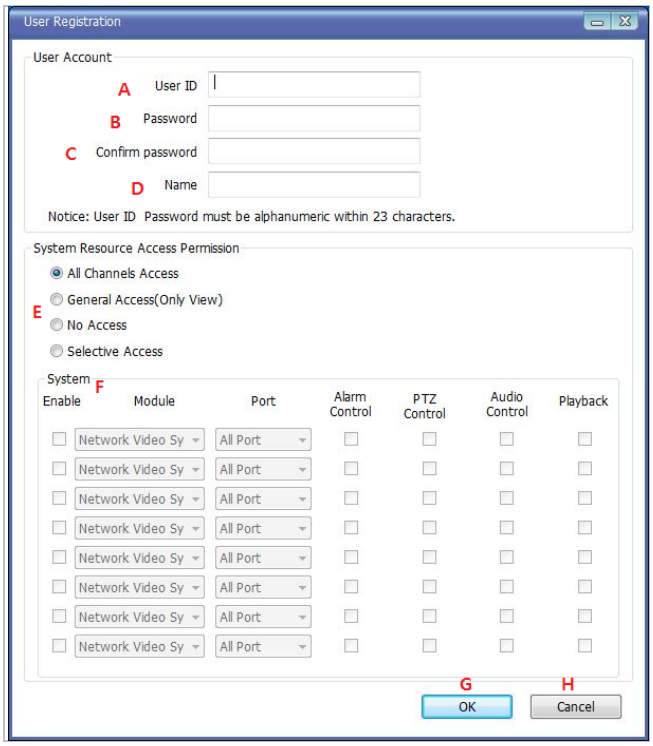
In this section, you will see how to manage user information. To start managing users, select **User Management** from the menu tree.



		Items	Descriptions
	A	User Registration	Register new users to the system.
	B	User Modification	Change the information of existing users.
	C	User Deletion	Remove the account of existing users.

36.6.1. User Registration

To register a new user, click the 1'st button on the tool bar in the sub-menu toolbar.



	Items	Descriptions
A	User ID	Enter a new User ID to register.
B	Password	Enter the Password for the new user.
C	Confirm password	Enter the same Password for confirmation.
D	Name	Enter the name of the new user to be registered.
E	System resource access permission	Choose the level of permission for System resource access. • All channels access: Viewing all cameras, Alarm, PTZ, Audio, Searching • General access: Viewing all cameras only • No access: An user account without any access to cameras • Selective access: Access to only selected cameras and privileges.
F	System Permission	Eight different modules can be set. The setup can be made on Module, camera, alarm, PTZ, Audio, and Search respectively. Enabling each module gives access permission to it.
G	OK	Click this button to apply the registration of the new user.
H	Cancel	Click this button to cancel the registration process.

36.6.2. User Modification

To modify a user's information, select the users name than click the second button on the submenu toolbar. The **User Registration** window will come up on the screen, make the necessary changes and click **OK** .

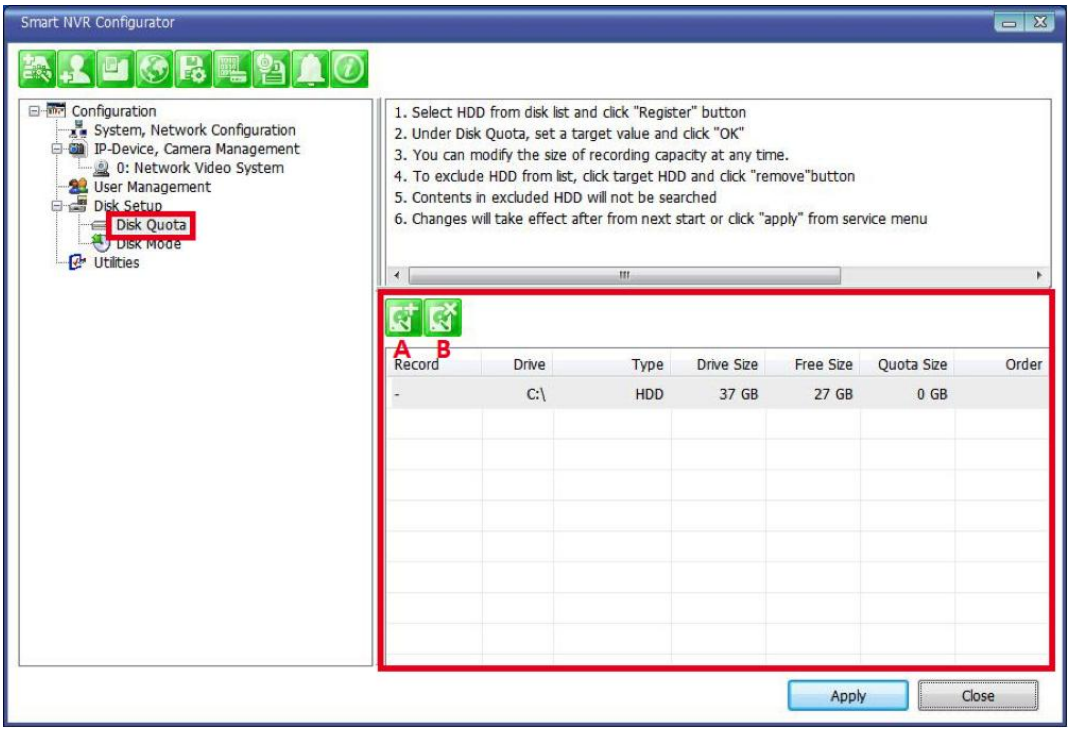
36.6.3. User Deletion

To delete an existing user, select the user name than click Remove Registered user account, another screen will pop up confirming to proceed with deletion, click **OK** to proceed .

36.7. Disk Setup

36.7.1. Disk Setup

When you click **Disk Setup** on the menu tree, it will show two sub-menu items. One is **Disk Quota**, and the other is **Disk Mode**. The following window shows the **Disk Quota** mode.



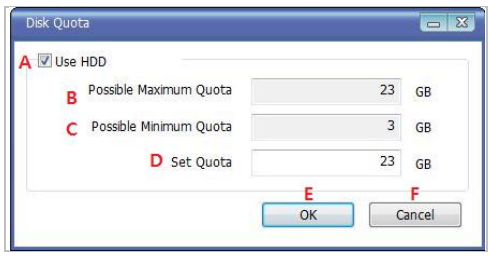
		Items	Descriptions
	A	Disk Quota Setup	Define the HDD for recording and configure the size of quota.
	B	Disk Quota Deletion	Delete previously assigned disk quota.

36.7.2. Disk Quota Modification and Deletion

When EN-V-R program is installed, all local drives are assigned as recording devices. To modify the disk quota for recording, click **Disk Quota** on the menu list, and select the drive to be modified.

To change the disk quota size, click the 1'st button on the sub tool bar, or double click the drive on the

device list. The following window will be displayed.

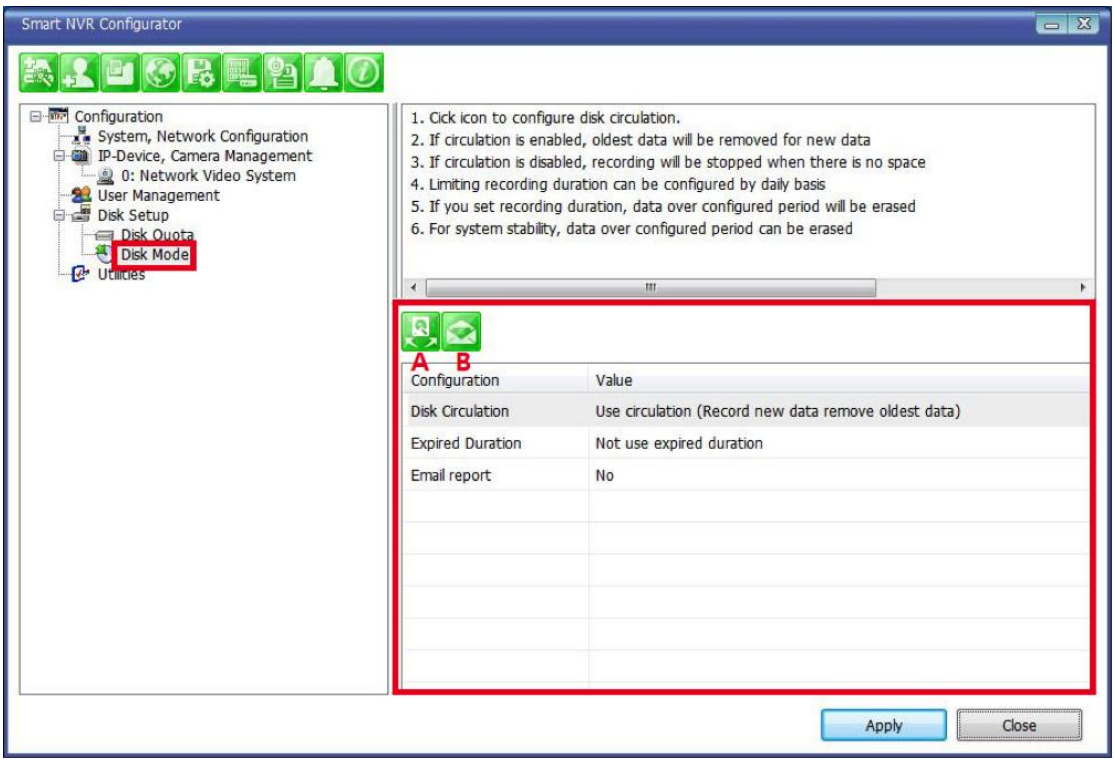


	Item	Description
A	Use HDD	Decide whether this HDD is to be used.
B	Possible Maximum Quota	Display Possible maximum quota on this HDD.
C	Possible Minimum Quota	Display Possible minimum quota on this HDD.
D	Set Quota	Enter the desired size of disk quota for recording.
E	OK	Click to apply the configured disk quota.
F	Cancel	Click to cancel the disk quota configuration.

To delete the existing disk quota, click **Disk Quota** on the menu list. Then choose the drive quota to be deleted. Click the 2'nd button on the sub tool bar.

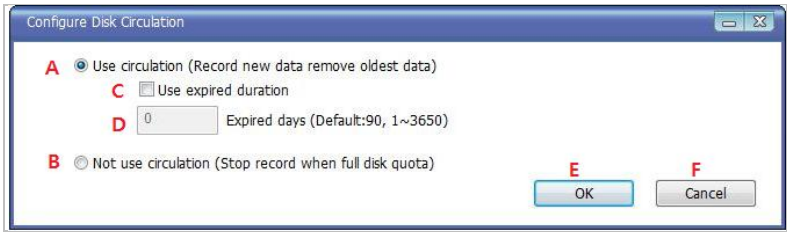
36.7.3. Disk Mode Change

To modify the disk circulation style, click Disk Setup, and then **Disk Mode** on the menu tree.


Smart NVR Configurator
Configuration
System, Network Configuration
IP-Device, Camera Management
0: Network Video System
User Management
Disk Setup
Disk Quota
Disk Mode
Utilities
1. Cick icon to configure disk circulation.
2. If circulation is enabled, oldest data will be removed for new data
3. If circulation is disabled, recording will be stopped when there is no space
4. Limiting recording duration can be configured by daily basis
5. If you set recording duration, data over configured period will be erased
6. For system stability, data over configured period can be erased
A
B
Configuration
Value
Disk Circulation
Use circulation (Record new data remove oldest data)
Expired Duration
Not use expired duration
Email report
No
Apply
Close

	Items	Descriptions
A	Disk Circulation Setup	Configure disk circulation type.
B	Disk Usage Report Setup	Configure email address for reporting.

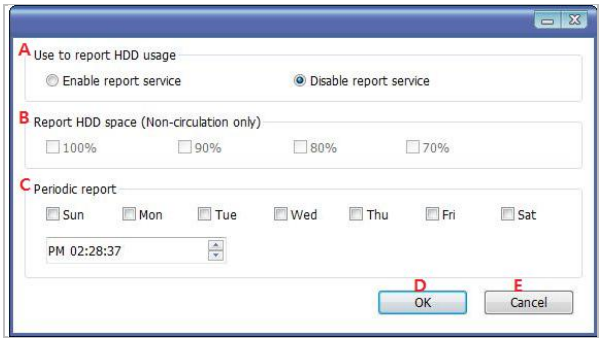
Click the **Disk Circulation** in the list. The following window will be displayed.



	Item	Description
A	Use circulation	Select this if disk circulation will be used.
B	Not use circulation	Select this if disk circulation will not be used.
C	Use expired duration	Decide whether the expiration will be used for recording. (This can be seen when "Use circulation" is selected.)
D	Expired days	Enter the date when the recorded content will expire.
E	OK	Click this to apply the Disk circulation settings.
F	Cancel	Click this to Cancel Disk circulation settings.

Configure email reporting for disk usage

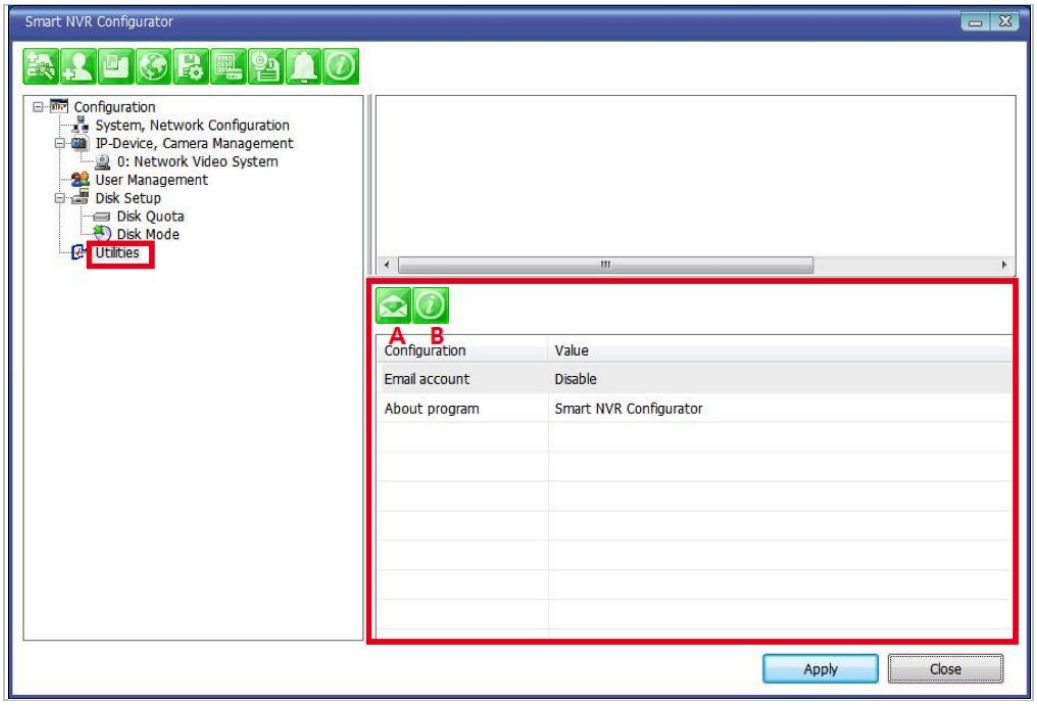
To modify the email notification behavior for hard disk recording.



	Item	Description
A	Use to report HDD usage	Choose whether to Enable or Disable the report service.
B	Report HDD space	When disk circulation is not used, select the HDD size when it will be reported by email.
C	Periodic report	Define when Periodic reports will be sent.
D	OK	Click to apply the Email report settings.
E	Cancel	Click to cancel Email report configuration.

36.8. Utilities

Select **Utilities** from the menu tree. You can perform two functions in **Utilities**, one is **Email Account Configuration** and the other is **About Program**.

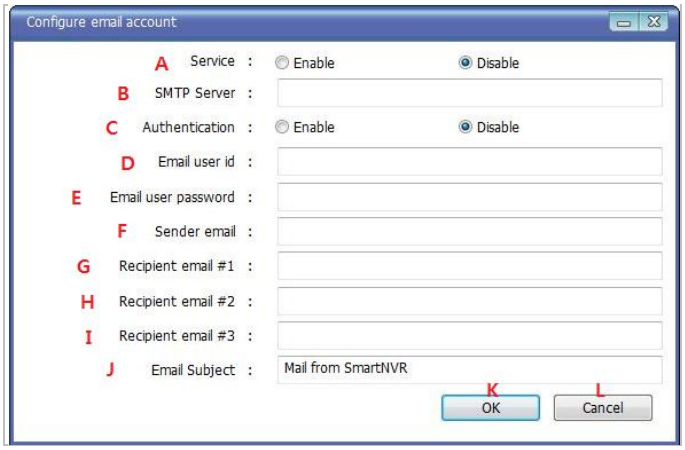


	Items	Descriptions
	A Email Account	Configure email account.
	B About Program	Display the information of EN-V-R program.

36.8.1. Email account Configuration

Once an email account is registered here, you can receive email notification from the EN-V-R program upon certain events. To configure an email accounts, click **Utilities** on the menu tree. Click *Configure*

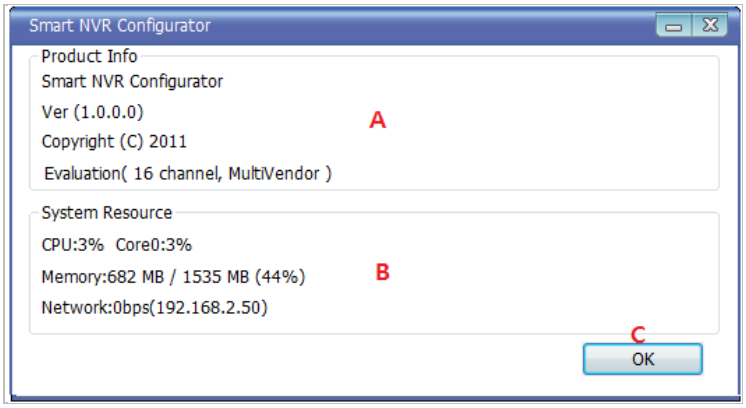
email account for mail service


Configure email account
A Service : Enable Disable
B SMTP Server :
C Authentication : Enable Disable
D Email user id :
E Email user password :
F Sender email :
G Recipient email #1 :
H Recipient email #2 :
I Recipient email #3 :
J Email Subject : Mail from SmartNVR
K OK
L Cancel

	Item	Description
A	Service	Decide whether to report HDD usage by email or not.
B	SMTP server	Enter the address of SMTP server for sending email.
C	Authentication	Decide whether to use Authentication.
D	Email user id	Enter the sender's id for email account.
E	Email user password	Enter the password of the sender's email account.
F	Sender email	Enter the Sender's email address.
G,H,I	Recipient email #1,2,3	The email addresses of three Recipients to be notified.
J	Email subject	Enter the title of the Email when it's sent.
K	OK	Click to apply the Email account registration.
L	Cancel	Click to cancel this configuration.

36.8.2. About Program

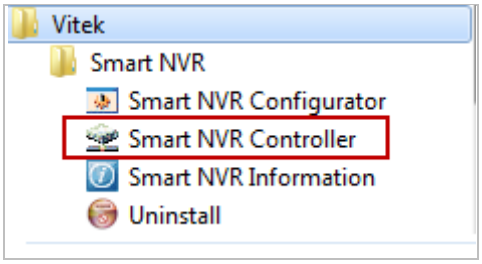
To displays the information of this program on the screen, Click *Information of this program*.



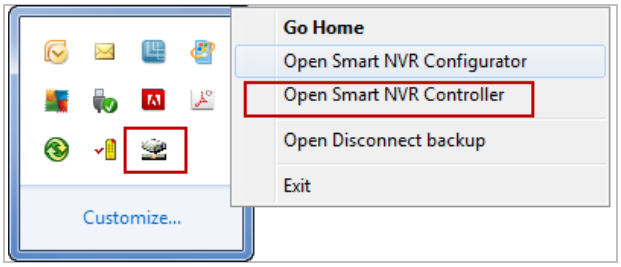
	Items	Descriptions
A	About program	Show the information about the EN-V-R running.
B	System Resource	Displays the PC's system resource information.
C	OK	Click this button to close the Window.

37. Using EN-V-R Controller

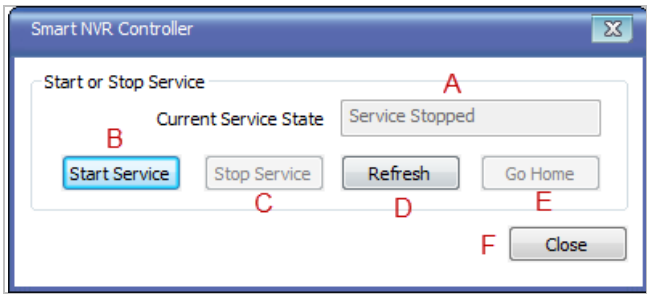
To open EN-V-R controller, click **Start >All Programs>Vitek>SMART NVR Controller**.



Smart NRV controller will be on the lower right part of the system tray. Then right click the icon a sub-window will display, click on Open Smart NVR Controller.



The following window will open



	Items	Descriptions
A	Current Service State	Shows whether EN-V-R Service is running or stopped.
B	Start Service	Click this button to start EN-V-R Service when it's stopped.
C	Stop Service	Click this button to stop EN-V-R Service when it's running.
D	Refresh	Refresh the Screen.
E	Go Home	Go to the EN-V-R's built-in webpage.
F	Close	Close the EN-V-R Controller window.

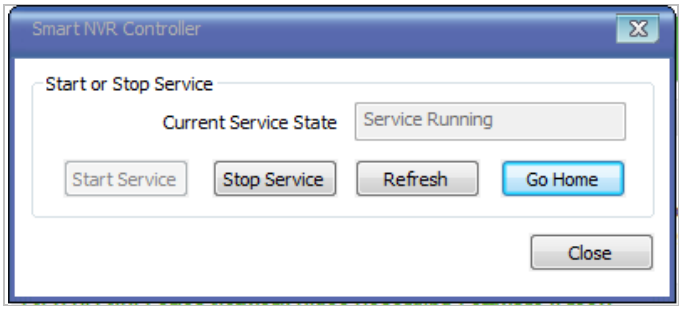
38. Connecting to EN-V-R

38.1. PC with EN-V-R installed

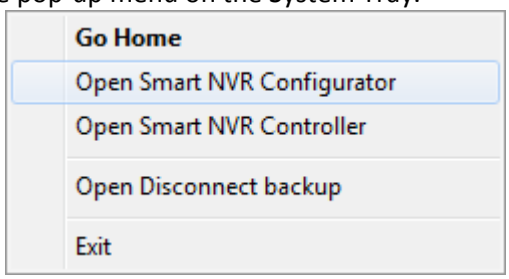
You can connect to EN-V-R in various ways as explained below.

- Click **Go Home** in EN-V-R Configurator

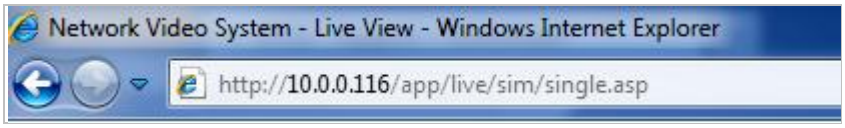
- EN-V-R Controller window.



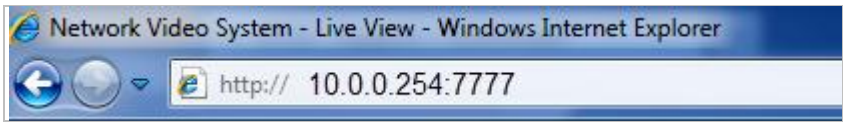
- Click **Go Home** from the pop-up menu on the System Tray.



- In Internet Explorer, enter the IP address of the computer that EN-V-R is running on.



- In case that the HTTP port for EN-V-R is not 80 (default), the port number should be entered together with the IP address. (the example below assumes HTTP port of 7777)



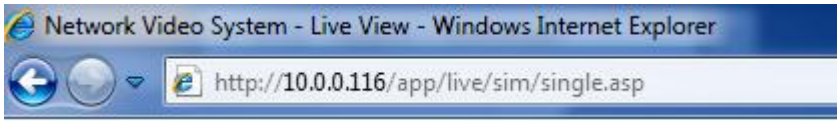
After you successfully connecting to the EN-V-R homepage, you will see the following window.

	Items	Descriptions
A	Home	Go to EN-V-R's homepage.
B	Live View	Click this button to execute Live View program. You can use various features such as live view, audio transmission, PTZ control, unconditional recording, etc.
C	Player	Click this button to search, record, and back up the video data sent from IP devices registered in EN-V-R.

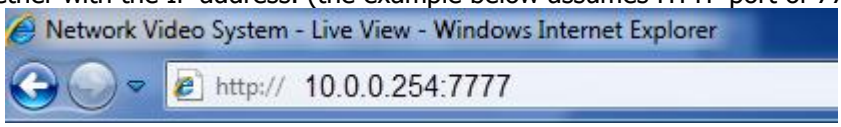
38.2. PC without EN-V-R

- If your PC doesn't have EN-V-R program installed, type in the IP address of the PC where EN-V-R is running.

Note: Refer to **Section 18** *ENVI Series Viewer* **on page 100** *for details on how to use ENVI Viewer program. Refer to* **Section 28.** *ENVI Smart Player* **on page 132** *for details on how to use ENVI Smart Player program.*



- In case that the HTTP port for EN-V-R is not 80 (default), the port number should be entered together with the IP address. (the example below assumes HTTP port of 7777)



VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. Digital recording and storage products are also warranted for 3 years except for the hard drives which carry their own independent factory warranty from the hard drive manufacturer. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a Vitek Authorized Reseller.

“Alpha Series by VITEK” products carry a three (3) year limited warranty. All other factors of the standard VITEK warranty will apply as stated above. ** Three Year “Alpha Series by VITEK” Warranty effective September 1st 2010. “Alpha Series by VITEK” products purchased prior to September 1st 2010 carry a one (1) year warranty.

** Three Year Warranty on all products except Alpha Series became effective on April 1st 2009. Legacy Products purchased prior to April 1st 2009 carry a two (2) year warranty.

This warranty shall not apply to repairs or replacements necessitated by any cause beyond the control of VITEK, including but not limited to, acts of nature, improper installation, excess moisture, misuse, lack of proper maintenance, accident, voltage fluctuations, or any unauthorized tampering, repairs or modifications. This warranty becomes VOID in the event of alteration, defacement, or removal of serial numbers.

Within the first 6 months of purchase, VITEK will replace or credit any defective product at the request of the customer (subject to availability) with a new product that equals or exceeds the performance of the original product purchased.

Within the first 6 months of purchase, at its sole discretion, VITEK may issue an advance replacement for a defective product; however, all related costs including, but not limited to shipping and/or delivery charges will be the responsibility of the customer. If upon return inspection a product is determined to be in good working order or shows evidence of misuse, the customer will be responsible for full payment of the original product purchased as well as the replacement product.

Beyond the first 6 month period for the remainder of the warranty, VITEK’S responsibility shall be limited to repairing the defective product, including all necessary parts and related labor costs. At its sole discretion, VITEK may choose to either exchange a defective product or issue a merchandise credit towards future product purchases. Any replacement parts furnished in connection with this warranty shall be warranted for a period not to exceed the remaining balance of the original equipment warranty.

A Return Authorization number or “RA” number must be obtained prior to the return of any item for repair, replacement, or credit. VITEK requires that this “RA” number be clearly printed on the outside of the shipping carton to avoid refusal of said shipment. The Return Authorization number expires after 30 days. Products returned after the 30 day period will be subject to refusal. Shipping charges, if any, must be prepaid. A copy of the bill of sale (or invoice of purchase), together with a complete written explanation of the problem must accompany all returns.

Vitek makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a Vitek Authorized Reseller.

CLASS A DIGITAL DEVICE (INDUSTRIAL & COMMERCIAL ENVIRONMENT)
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to CE and FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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INDUSTRIAL VIDEO PRODUCTS, INC.

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